







CBOM and EBOM Use Cases

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ENG01 Home Engineer User

Purpose	Engineering home page overview	Status	Define
Stakeholders	Design Engineers		
Beginning			
Interactions			
End			
Constraints			

The home page is available for users with roles Design Engineer (Product Design and Electrical).

Page shows several tabs, containing information related to different type of parts and drawings:

- Parts belongs to the connected user
- Parts to be approved (available only if user has the approved permission)
- Sketch Parts to be translated to EC Part (available only if user has the approved permission)
- Drawing belongs to the connected user
- Drawings to be approved (available only if user has the approved permission)
- Change References
- Electronic components
- Packaging components
- Material parts

<i>à</i> s		RIENCE	ENOVIA Collaboration	and Approvals	All	✓ Search	۹ 🍾		Matthew S	piteri <u> </u> 🔁
▼ Co Ap	llaboration and provals	My F Create	Parts Parts to Appro	ve Sketch to EC Part My CAD Drawing) eç	CAD Drawings to A	Change References	CAD Drawings to R Electronic Compon	Packaging Compone	Material Parts
Ho	me RFQ User	🗆 Nam	10 🔺	Туре	Rev	Description		Part Classification	Reject Comment	
Ho	me Engineering User		00000186	EC Part	00	PCB FR5 1.6mm		-		
Ho	me Change		00000196	Sketch Part	А	BAS21		-		
Ma			00000205	Sketch Part	Α	Color to CIE 1931		-		
Sh	ortcuts		00000215	Sketch Part	А	Resistors, 1k, 5%				

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The tables related to parts and drawings tabs show the following information:

- Name
- Type
- Rev: revision index of the part
- Description
- Part classification
- Reject comment

My Parts Parts to Approv	ve Sketch to EC Part My CAD Drawing	s C	AD Drawings to A Change References	CAD Drawings to R Electronic Compon	Packaging Compor
Create Parts	🛄 - 🔜 - 🔜 🖉 🌄 🎚	[X	-		
Name 🔺	Туре	Rev	Description	Part Classification	Reject Comment
00000186	EC Part	00	PCB FR5 1.6mm	-	
00000196	Sketch Part	А	BAS21	-	
00000205	Sketch Part	А	Color to CIE 1931	-	
00000215	Sketch Part	А	Resistors, 1k, 5%	-	
00000225	Sketch Part	А	Capacitors 10nF	-	
00000235	Sketch Part	А	Switch	-	
00000413	EC Part	00	Housina	-	

The tables related to specific classification show specific attribute (i.e. Component Type and Package for Electronic component, Dimension and Net Weight for Packaging component, State and Approved for Production for Material Part)

Π	Mate	rial Parts Parts to A	pprove Sketch to EC Pa	rt My CAD Drawings	CAD Drawings to A	Change References >>>
	*	× 📮 🛄 - 🛛 🖽 -	• 📰 • 🔜 🖉 🏹 🔮	L ∭ ⅔ -		
	Nam	ie 🔺	Description	State	Approved For Production	Request For Production
		090100	DURETHAN BKV 30H 1.0	Publish	NO	NO
		090101	DURETHAN BKV 30H 2.0	Publish	NO	NO
		090107	BEETLE 60 GS6 9008 - B	Publish	YES	NO
		090108	DURETHAN BKV 30 - RED	Publish	YES	NO
		090110	MINLON 10B1-40 BK-61	Publish	YES	NO
		090116	DURETHAN BKV 30H1.0	Publish	NO	NO

The icon contained in toolbars described in this chapter will be better described in following use cases details.

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My Parts

In this tab are listed all the parts originated by the user; the table contains both EC parts (parts used in Engineering BOM) and Sketch parts (parts used in Concept BOM).

My Parts Parts to Appro	ve My CAD Drawings CAD Drawings to	A	CAD Drawings to R Electronic Compon	Packaging Compone Material Parts
Create Parts 🚅 📜 📮	🔍 - 📑 - 📰 - 💭 📫 🖉 🏹 🔮) (≫-	
Name ▲	Туре	Rev	Description	Part Classification
000000507	Sketch Part	В	Index	-
000000508	Sketch Part	А	Button	-
000000509	Sketch Part	А	PCB	-

Columns:

In the My Parts tab the following information is shown:

Name: Part Number, it's also a link to part details form

Type: specify if part number is a Sketch Part or an EC Part

Rev: revision (revision sequence for Sketch part is "A,B,C,...", for EC part is "00,01,02,...")

Description: part description

Part Classification: part classification defined by part owner

Toolbar icons:

Create Parts

Create Parts Allow to create a new part

Allow promote or demote operations on the selected parts

In order to show only EC parts or Sketch parts, user can filter by type (see document "Basic Training"):

- Select icon Refinement (icon in toolbar) - Type EC Part (11) Sketch Part (48)
- Select the type to search in Refinement form _

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Parts to Approve

In this tab are listed all the parts (both EC and Sketch parts) that require approval by a user with Senior Design Engineer role

My Parts Parts to Appro	ve My CAD Drawings C	AD Drav	wings to A CAD Drawings	to R Electronic Compon	>>	
📮 斗 · 📑 · 📑 ·	I 🖉 🏹 🔂 🗏 🔆 ·					
Name 🔺	Туре	Rev	Description	Part Classification	Reject Comment	
000000106	Sketch Part	А	Index	-		^
000000107	Sketch Part	А	Button	-		
🗌 🐚 000000151	EC Part	03	PCB FR4 1.6mm	-		
000000480	EC Part	00	BAS21	-		
🗌 🐚 000000481	EC Part	00	Resistors, 1k, 5%	-		
000000566	Sketch Part	Α	Roof - RH - Chrome Wall	-		
000000597	EC Part	00	Switch variant white	-		
000000598	EC Part	00	Button	-		
000000599	EC Part	00	Index	-		
000000600	EC Part	00	Plunger	-		

Columns:

The Parts to Approve page shows the same information shown in My Parts page, other than an additional column:

Reject Comment: in case of part approval rejected, the column shows the reject comment

The toolbar doesn't contain icons related to specific functions because the part approval process has to be completed using dedicated function inside the part detail and main menu.

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Status	Template			8

Sketch to EC Parts

In this tab are listed all the Sketch Parts that are approved (state Complete) and that can be translated to EC Parts by a user with Senior Design Engineer role

My Parts	Parts to Approve	Sketch to EC Part	. My	CAD Drawings CAD Draw	ings to A Change R	eferences CAD Dra	wing
🗌 Name 🔺		Туре	Rev	Description	Part Classification	Reject Comment	
□ 🛃 000	000146	Sketch Part	А	E-call Switch module RH	-		Ē
□ 👪 000	000176	Sketch Part	А	Button RH	-		Þ
□ 🛃 000	000334	Sketch Part	А	Switch 2 buttons	-		Ē
□ 🛃 000	000344	Sketch Part	А	Switch 3 buttons	-		₽
□ 🛃 000	000354	Sketch Part	А	Switch 4 buttons	-		┏
□ 🛃 000	000364	Sketch Part	А	PCB	-		₽
000	000374	Sketch Part	А	Button	-		Ē

Columns:

The Sketch to EC Parts page shows the same information shown in Parts to Approve page.

The toolbar doesn't contain icons related to specific functions because the part can be translated using dedicated function inside the part Bill Of Material menu (see chapter "CBOM to EBOM Upgrade").

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My CAD Drawings

In this tab are listed all the CAD drawing that are created by the user

My Parts Parts to Appro	ve	My CAD Drawings CAD I	Drawings to A CA	D Drawings to R	Electronic Compon Packag	ing Compone Ma	aterial Parts
🛅 📫 江 🗖 🗍 -	-	🏗 - 📃 🖉 🏹 🚱	▦ ‰-				
🗌 Name 🔺	Rev	Description	Drawing Format	Supporting Type	Supporting Document Number	Reject Comment	State
00000003	00A	test	-	-			Preliminary
000000010	01C	test 1	MEM Component	N/A			Preliminary
000007011	00B		-	-			Preliminary
🗌 🛱 453052-A	05H	MEM Assembly Drawing	MEM Assembly Dra	Change Notice	E14109		Preliminary
5897	00A		Lab Jig	-			Preliminary
🗌 🛱 L-SN000007366	00A		Lab Jig	-			Preliminary
🗌 🛗 L-SN5897	00A		Lab Jig	-			Preliminary
🗌 🛗 P-000000010	00A		P-Layout - D	-			Preliminary

Columns:

In the My CAD Drawings tab the following information is shown:

Name: Drawing Number, it's also a link to drawing details form

Rev: revision

Description: drawing description

Drawing Format, Supporting type, Supporting Document Number: drawing classification

Reject Comment: in case of drawing approval rejected, the column shows the reject comment; in this tab is always empty

State: drawing state, in this case always Preliminary

Toolbar icons:



Allows users to create a new drawing, entering manually the drawing number

Allow promote or demote operations on the selected drawings



The toolbar contains the icon Refinement (icon in toolbar), so the users can filter the table content with attribute values.

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CAD Drawings to Approve

In this tab are listed all the CAD drawing that require approval by a user with Senior Design Engineer role

My Parts Parts to Ap	oprove	My CAD Drawings CA	AD Drawings to A	CAD Drawings	to R Electronic Compon	>>	
📮 🛄 - 📰	-	2 7 🔮 🗮 🔆 -					
🗌 Name 🔺	Rev	Description	Drawing Format	Supporting Type	Supporting Document Number	Reject Comment	State
088600	00A	MEM Raw Material	MEM Raw Mate	N/A			Review
🔲 📇 098050	00A	MEM Raw Material	MEM Raw Mate	N/A			Review
098054	00A	MEM Raw Material	MEM Raw Mate	N/A			Review
🗌 🛱 10605	01C	MEM Component	MEM Component	ECN-	046		Review
🗌 🛗 10607	02E	MEM Component	MEM Component	Change Notice	S148		Review
🗌 🛱 10617	01B	MEM Component	MEM Component	Change Notice	S222		Review
🗌 🛗 10636	00A	MEM Component	MEM Component	N/A			Review

Columns:

The CAD Drawing to Approve page shows the same information described in My CAD Drawing page.

The toolbar doesn't contain icons related to specific functions because the drawing approval process has to be completed using dedicated function inside the drawing detail and drawing menu.

Version	5	Date:	12-Dec-2016	
Status	Template			11

Change References

In this tab are listed all the Change References container that are in active (state Create or state Active).

My Parts	Parts to Approve		Sketch to EC Part	My CAD Drawings	CAD Drawings to A	Change References	CAD Drawings to R				
name rev rev	name rev revision: Structure View Filter: Active										
*	• • 📰 • 💓	Y	' 😫 🗐 🔆 -								
Name 🗸	đ	•	Owner		Description		State				
CRef-0000	070		Steve Zahra		JLR 4-GANG X760 w/LIN	I - Update of drawings to	Create				
CRef-0000	069	•	Wajdi Halawi		Adding positioning holes	in the liner of the double s	Active				
CRef-0000	068		Steve Zahra		Included all MEM part no:	s in BOM.	Active				
CRef-0000	067 🖪		Nathan Zammit		Drawing update following	g design review.	Active				
CRef-0000	066	•	Eddy Youssef		remove unnecessary din	nensions for painted versi	Active				
CRef-0000	065		Nathan Zammit		Adding grease point refer	rence on Active Suspensi	Active				
CRef-0000	064		Steve Zahra		Change of backlight LED	s from Blue to White	Active				
			e ie i		A 11 1 1		a				

Columns:

In the Change References tab the following information is shown:

Name: CRef Number, it's also a link to Change Reference details form

Owner: CRef owner

Description: CRef description

State: CRef state

Toolbar icons:



Allows user to create a new Change Reference contained

About functions to create and manage Change Reference, see chapter "Change Reference container".

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Electronic components

In this tab are listed the library of electronic components

My Parts Parts to App	ргоvе	My CAD Drawings C	AD Drawing	s to A	CAD Drawings to	R E	lectronic Compon	>>
Electronic Components Fi	lter:Def	fault, EC Part						
× 🗔 🚉 - 🖩 - 闕 🖉 🏹 😫 🗮 🔆 -								
🗌 Name 🔺	Rev	Description	Owner	State	Component Type	Package	Value /Micro Arch. +	no of pins / Size / Dominant Wa
CC080547N0AXX0R	00	C 0805 47nF 10% X7R 50V	User A	Relea				
🗌 ᠳ CC12060103TKX0R	00	CAP CER 10UF 25V 10	Test Ev	Relea				
🗌 🐚 CC12066801TKX0R	00	CAP CER 6.8UF 25V 10	Test Ev	Relea				
CCXXTH01P2VSX0R	00	CAP CERAX7R 1000pF	Josep	Approved				
CCXXTH0472MRX0B	00	CAP CERAX7R 0u47F 1	Josep	Approved				
CCXXTHN470VSX0R	00	CAP CERAX7R 470pF 1	Josep	Approved				
CT06031002NCX0R	00	CAP TANT 10UF 10V 20	Test Ev	Prelimi	Capacitor_Tant	603	1000-99900 nF	

Columns:

In the Electronic Components tab the following information is shown:

Name: Part Number, it's also a link to part details form

Rev: revision

Description: part description

Owner: part originator

State: part state

Component Type, Package, etc.: part classification

Toolbar icons:



Allows users to create a new Electronic component; command is available only to users with role Electronic Design Engineer

× Allows users to delete the selected item, depending on item state and user permission

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Status	Template			13

Packaging Components

In this tab are listed the library of packaging components

My Parts Parts to Approv	/e	My C	AD Drawings CAD Drawi	ngs to A CAD D	rawings to R Ele	ctronic Compon	Packaging Compone	. »
* × 📮 🛄 - 🐻 - 闕 🖉 🏹 😫 🚎 🎇 -								
🗌 Name 🔺		Rev	Description	State	Dimension	Net Weight UoM	Weight	Part Weight Gross / (g
□ @ 0000000631P		00	Package for 0000000631	Released		G	10.0	
□ 🔗 000000461		00	Mitsubishi RH Switch 16	Preliminary			0.0	
000000546		00	Test pkg	Released		G	10.0	
□ 🔗 000000547		00	test	Released		G	8.0	
000000548		01	Packaging for new product	Released		KG	10.0	
000000549		00	New packaging compon	Released		KG	0.118	
000000550		00	New component pkg 2	Released		KG	0.5	
000000609		00	JLR ESS packaging	Preliminary			0.0	

Columns:

The Packaging Components page shows the following information:

Name: Part Number, it's also a link to part details form

Rev: revision

Description: part description

State: part state

Dimension. Net Weight UOM, etc.: part classification

Toolbar icons:

* ×

Allows users to create a new Packaging component; command is available only to users with role Product Design Engineer

× Allows users to delete the selected item, depending on item state and user permission

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Material Parts

In this tab are listed all the library of raw parts

My Parts Parts to Appro	ve My CAD Drawings CAD Dr	awings to A CAD Drawings to R	Electronic Compon Mate	erial Parts »			
* × 🗔 📴 - 📰 - 🔜 🖉 🏹 😪 🚎 🔆 -							
🗌 Name 🔺	Description	State	Approved For Production	Request For Production			
090139	MINLON 10B1-40 NC-10-NATURAL	Released	NO	NO			
090140	PA66	Released	NO	NO			
090142	CAPRON 8267GHS BL6326A(BL	Released	NO	NO			
090151	DURETHAN B30S 019013(WHITE)	Released	NO	NO			
090152	DURETHAN B30S 901510(BLACK)	Released	NO	NO			
090157	DURETHAN B30S - NATURAL	Released	NO	NO			
090162	JONLYON 60A-COLOUR 9000(BL	Released	NO	NO			
090163	DURETHAN B30S (GREY)	Released	NO	NO			
090167	ZYTEL HTN 51G45 HSL BK-083	Released	NO	NO			

Columns:

The Material Parts page shows the following information:

Name: Part Number, it's also a link to part details form

Description: part description

State: part state

Approved For Production: specify if part is approved for production or only for prototype

Request For Production: specify if there is a request to approve for production the material part

Toolbar icons:



Allows users to create a new Material Part; command is available only to users with role Product Design Engineer

Allows users to delete the selected item, depending on item state and user permission

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ENG02 Part Details Overview

Part information page overview	Status	Define
Design Engineers		
Create a part; search and update a part		
	Part information page overview Design Engineers Create a part; search and update a part	Part information page overview Status Design Engineers Create a part; search and update a part

Create New Parts

The function to create a new part is contained in two toolbars:

- From tab My Parts; in this case the part is created standalone

My Parts Parts to Appro	ve My CAD Drawings CAD Drawings	to A	CAD Drawings to R Electronic C	ompon	Packaging Compone	Material Parts	
Create Parts 😂 💷 🛄 - 🖼 - 📰 - 🔜 📲 🖉 🏹 😪 🖼 🔆 -							
Name 🔺	Туре	Rev	Description		Part Classification		
000000507	Sketch Part	В	Index		-		
000000508	Sketch Part	А	Button		-		
000000509	Sketch Part	Α	PCB		-		

- From menu Action in EBOM; in this case the part is created in a EBOM



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The command opens a new window

000000105 Create Part						
🚱 🔆-						
	Fleids in red Italics are required					
Туре	Part	Policy	Sketch Part V			
AutoName Series	Part Number	Number of Parts	1			
			\frown			
			Done Cancel			

User has to enter:

- part type (optional): currently the only type used is Part (default); about Material Parts, Electronic Components and Packaging Components creation, dedicated commands are provided
- Policy: select Sketch Part for parts to be used in Concept BOM or EC Part for parts to be used in Engineering BOM
- AutoName Series: rule used for naming convention; always use Part Number
- Number of Parts: number of parts to create (default 1)

After task completion, the table containing the create command is updated.

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Part Details

Users can search for parts using several functionalities (search using the top search bar, using a summary table like My Parts, etc.). In the following example, search using the search top bar.

🕑 Disabler 📥 COOKlest 🖉 C33, 🔛 I	unis. 📼 inia	iges. 🕡 information. 🧮	wiscellaneous. 🖉 Ou	une. 🔌	NESIZE.	🔨 roois: 💼 view source:		nis .					v v	,
	ENOVIA Collat	boration and Appro	All 453050			o Q 💊			Μ	latthew Spi	teri 🚺	12		?
Search Refinement		Search Results				1 - 50 of approx. 68 Resul	ts Page	Size: 50) (Max	Value: 10	00)	ii i 1 2	• 101	×
Search 453050	QØ	E Q · × Q ·	• •	•	X	b			1					
Taxonomies	^ [📄 Display Name 🔺	Revision 🕋	Туре	Policy	Description	State	Modified	Originated	Owner	Û			Si
		2697		Tool	PDS	LAB JIG - 453050	Preli	Mar 4,	Mar 4, 2	crea			Ð	^
Types Image (2)		2744		Tool	PDS	LAB JIG - 453050	Preli	Mar 4,	Mar 4, 2	crea			ē	
Part(27) ⊕ □ DOCUMENTS(39)		2832		Tool	PDS	MOULD - 453050	Preli	Mar 4,	Mar 4, 2	crea			Ð	
 Libraries 		2833		Tool	PDS	MOULD - 453050	Preli	Mar 4,	Mar 4, 2	crea			Ð	
B ■ Technical Classification(2)		3.453050	00	Part	EC	BRAKE DUAL CCT 2.5MM	Rel	Feb 2	Jan 26,	Cor			Ð	
 Attributes 		4511		Tool	PDS	ASSY-453050(CAR37/O	Preli	Mar 4,	Mar 4, 2	crea			Ð	
Name		453050	00	Part	EC	BRAKE DUAL CCT 2.5MM	Rel	Feb 2	Jan 26,	Cor	0	C		>
Originated		🗌 📇 453050-A	03.J	CAD	PDS	MEM Assembly Drawing	Revi	Mar 1	Jun 27	crea	0	-	-	
Modified											0			
Description		🗌 🛱 453050-A	00A	CAD	PDS	MEM Assembly Drawing	Publ	Mar 1	Apr 3, 20	crea	0			
		🗌 🛱 453050-A	008	CAD	PDS	MEM Assembly Drawing	Publ	Mar 1	May 19	crea			Ę	

Selecting the link related to part name or using the icon \square , the system shows the part details on a new window.

Name	1.453050	Revision	00	State	Released			
Originator	User Agent	Originated	Jan 26, 2016	Modified	Feb 27, 2016			
Part Classification	-	Quality Release						
Description	BRAKE DUAL CCT 2.5MM							
Design Purchase	Design	Long Lead Time Component	FALSE					
End Item	Yes	CMS Part Status	Malta: History (GL Expense Code: FSW - FINISHED SWITCHES OE)					
Technical								
Net Weight	0.036	Gross Weight	0.0	Net Weight UOM	KG			
Carry Over Parts		Remarks						
Similar Parts								
Classification Path	Technical Classification → Finished Product							
Finished Product								
Finished Product								
Quantity Multiplier								

The part detail form is composed by the following section:

- System defined field:

-

- Name, revision, state, user originator, originated date, last modified date
- Attributes common to all part type:
 - Part classification, Quality Release, description, design or purchase, if the component is defined as Long Lead Time
- Attribute used by MBOM Engineer
 - End Item, CMS Part Status (read only field with plant information)
- Technical attributes common to all part type:

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- o Weights, Unit of Measures, Carry Over Parts, Similar Parts, Remarks
- **Classification Path:** -
 - Part classifications and related specific attributes

Toolbar icons:

The icons contained in the part details toolbar depends on user permission and part state:



The following functions are available only to users with roles Product and Electronic Design Engineer:



Allows users to update part information



Allows users to create by copy a new part



Allows users to transfer the part ownership to another user

The other functions are available to all users (see document "Basic Training")

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Part Header portal

Other than the part details form (tab Properties), the part form is composed by several tabs:

Properties	Material Parts	CMS Information	Lifecycle	Where Used	Revisions	Versions	History	Images	Route

Material Parts

Form shows information used to define Base Material, Plating and Painting information

Properties	Material Parts	CMS Information	Lifecycle	Where Used	Revisions	Versions	History	Images	Route		
/ 🗔 🔞	*										
Name	00000070			Revision	00				State	Review	
Description	Socket										
Base Materials											
		Material				Thickness			Percentage		Qty
1		190752 (ULTRAI	DUR LUX B452	0 BLACK)							
2											
3											
4											
5											
Painting	TRUE			Laser Etching	FALSE				Plating	FALSE	
Plating Materials											
		Material	S.A. Ne	et	S.A. Gros	S	Laye	ers	Process		Qty
1											
2											
3											
4											
5											
Painting Materials	5										
		Material		S.A. Net		S.A. Gr	055		Thickness		Qty
1											
2											
3											
4											

The user can select the icon Edit to define and update raw material definition

00000070 00	Properties Ma	terial Parts	CMS In		
Bill Of Materials		È-			
Change Management	Name	00000070			
Change Management	Description	Socket			
Specs & Documents	Base Materials				

Version	5	Date:	12-Dec-2016	
Status	Template			20

Properties	Material Parts	CMS Information	Lifecycle	Where Used	Revisions	Version	is History	Images	Route			
📮 🗟 🔆												
	Fields in red Italics a	re required										
Name	0000070				Revision		00			State	Review	
Description	Socket											
Base Materials												
1 2 3 4 5	Material 190752 (ULTRA	ADUR LUX B45 Clea Clea Clea Clea Clea Clea	Thickness ar ar ar ar ar	Per	centage		λty					
Painting	TRUE 🗸				Laser Etchi	ng	FALSE 🗸			Plating	FALSE 🗸	
Plating Materials												
	Material	S.A. Net		S.A. Gross		Layers		Process	0	ity		
1									×			
2									~			
3									~			
4									~			
5								1	~			
Deinting Materials												
Painting materials	Motorial	C.A. Not		S.A. Cross		Thickness		Oh				
1	Material	S.A. INEL		S.A. GIUSS		THICKNESS		Caty				
2												
3												
4										_		
5												
												_
												Done Cancel

In mode edit, the form allows users to enter manually material code and quantities

The fields related to material definition contain an icon "...", used to search for materials, and a button "Clear", used to remove the previous material defined

laterial	_	1
190752 (ULTRADUR LUX B45		Clea
		Clea

In order to search for a material, user has two choices:

- 1. Use the function "..." in order to query the raw material information
- 2. Enter the first digits of raw material part number and select a part number from a list prepared by the system

Version	5	Date:	12-Dec-2016	
Status	Template			21

1. User has to select the button "...". The table shows all part materials defined

Search Refinement	Search Results 1 - 50 of a	pprox. 525 Results Page	Size: 50 (Max Value:	1000) iii i 1 2 3 4 5 6 7 8 9 1
Q 2	🗄 🕒 🔍 - 💽 - 🚺	🗊 • 🔜 🧮 🔆 •		
▼ Taxonomies	Name 🔺	Revision Type	Description 4	Assignees State (
 Types 	000000545	00 Material Part	Raw material new	Approved
⊡ Part(525)	000000601	00 Material Part	Plastic new	Review
	000000602	00 Material Part	Nylon new material	Review
 Libraries 	● 090100	00 Material Part	DURETHAN BKV 30H 1	Released
	090101	00 Material Part	DURETHAN BKV 30H 2	Released
 Attributes 	090107	00 Material Part	BEETLE 60 GS6 9008	Released
Name	090108	00 Material Part	DURETHAN BKV 30 - RED	Released
Originated	090110	00 Material Part	MINLON 10B1-40 BK-61	Released
	090116	00 Material Part	DURETHAN BKV 30H1.0	Released
Modified	090117	00 Material Part	DURETHAN BKV 15H 2	Released
Description	090133	00 Material Part	CAPRON 8233G HS BK1	Released
Comment	< >	<		
< >	×			Submit

User has to select materials and select command Submit.

The other fields (Surface Area information, Thickness, etc.) can be completed manually.

About material selection, the table with search results contains a field Libraries, used to search materials belonging to specific classification:

Search Refinement	Searc	ch Results 1 - 2 of app	orox. 2 Res	ults Pag	e Size: 50 🕨 (Max Valu	ue: 1000)	iii 1 →)))]
	(÷	Q- 💁- 📑- 🛙	•	罵 🕺	2-			
 Taxonomies 	Name	•	Revision	Туре	Description	Assignees	State	Û
▼ Types	O	000000601	00	Mater	Plastic new		Review	
	0	<u>090100</u>	00	Mater	DURETHAN BKV 30H 1		Rele	
 Liberines Liberines Technical Classification(Finished Product(45) Raw Material(3) Plastic(2) Miscellaneous Mate Attributes)							
Name								
Originated	<	>	<					>
< >							Submit	

Version	5	Date:	12-Dec-2016	
Status	Template			22

2. User has to enter the first two digits of raw material part number to be added The system will open a drop down list with all part numbers starting with digits entered

	Material 190752 (ULTRADUR LUX B45	(Clear
	S0	🤇	Clear
	S090407	^	lear
	S090192		lear
d	S096375		, icai
J	S090381		
ų	S090129		
	S096673		Vet
	S096115		E.
	S090264		E.
	S096660	¥	F
- 1			0

The user can enter other digits, in order to refine the query

190752 (ULTRADUR LUX	B45	
S0904		
S090407		
S090409	H	
S090410		
S090405		
	1	

The user has to select the part number, in order to update the Part Material form

Material	-
190752 (ULTRADUR LI	<u>Clear</u>
S090409 (RTP100-RTI	<u>Clear</u>
	<u>Clear</u>
	<u>Clear</u>
	<u>Clear</u>

Version	5	Date:	12-Dec-2016	
Status	Template			23

CMS Information

Form shows information mandatory information for CMS, that has to be defined by Engineers

- Description 1
- Unit of Measure
- Net Weight
- Net Weight Unit of Measure

Properties Ma	terial Parts (CMS Information	Lifecycle	Where Used	Revisions	Versions	History	Images	Route	
1 🗔 😪 🕉	A.								
Part Number	000000105		CMS C	ode Rule					
Part Classification	Moulded Parts								
Global Info									
Description 1	Housing								
Description 2									
Description 3									
Units of Measure and	d Weight								
Unit of Measure	PCS - PIECES		Net We	ight	10.0		Net W	eight UOM	G
Plant Info									
Plant Name		GL Code			GL Expense	Code			
	No Objects Found								

Except Unit of Measure (default value is PCS – PIECES), all other attributes are contained also in form Properties (Engineer can use form Properties to enter mandatory information).

Properties	CMS Information	Lifecycle	Where Used	History	images	Route			
1 📮 🗟	**								
Part Number	090100			CMS Co	de Rule	Code			
Part Classification	-								
Global Info									
Description 1	DURETHAN BK	V 30H 1.0 000	000 -						
Description 2	NATURAL								
Description 3									
Units of Measure a	and Weight								
Unit of Measure	KG - KILOGRAN	IS		Net Weig	ght	0.0	Net Weight UOM		
Plant Info									
Pla <u>nt N</u> ame		GL Code			-	GL Expense Code			
📁 Egypt		OTH - SALES	OTHERS			PLA - PLASTIC MATERIAL		-e	
🖆 Malta		OTH - SALES	OTHERS			PLA - PLASTIC MATERIAL		- p	

The section Plant Info contains the link to CMS information, related to plants where the part number is used

Version	5	Date:	12-Dec-2016	
Status	Template		24	

Lifecycle

Form shows the lifecycle of the part:

- The first portion shows the current state; the toolbar contains the commands to promote or demote the part state
- The second portion is composed by two tabs:
 - o Tasks/Signatures can be used to approve or reject, if part state is Review

	O Approvais	s shows when the part v	was promoted	d and the us	ers that	complete	e the task	S
Properties	Material Parts	CMS Information Lifecycle	Where Used	Revisions	Versions	History	Images	Route
Lifecycle								
000000010	rev 01: Lifecycle							
≡- 🖌 🚽	\$ 7 4 🖓							
	Pre	liminary — Review —	Approved		n	Obsolete		
		1						
Tasks/Signa	Approvals							
+ + /	📮 寻 - 📑 -	27 🗟 🔆						
🗣 💠 🤌	Assignee	Task/Signature	Task Title	Comments/Inst	ructions	Action	Due Date	Completed Dat
 State Preliminari 	Assignee	Task/Signature	Task Title	Comments/Inst	ructions	Action	Due Date	Completed Dat Feb 19, 2016
 State Preliminar Review 	y Assignee y Assignee	Task/Signature	Task Title	Comments/Inst	ructions	Action Approved	Due Date	Completed Dat Feb 19, 2016 Feb 19, 2016
 State Preliminar Review Approved 	y Assignee y Assignee	Task/Signature	Task Title	Comments/Inst	ructions	Action Approved	Due Date	Completed Dat Feb 19, 2016 Feb 19, 2016 Feb 19, 2016
State Preliminal Review Approved Publish	Y Assignee Y Samantha Grid	Task/Signature	Task Title	Comments/Inst	ructions	Action Approved	Due Date	Completed Dat Feb 19, 2016 Feb 19, 2016 Feb 19, 2016

Sketch parts have a different lifecycle

Properties	Material Parts	Lifecycle	Where Used »
Lifecycle			
000007381 re	v A: Lifecycle		
≡,∽⊈‡	1 🗔 🗞 :	=- 🔽 🚅	2 📮 🔆 ·
C	reateP	eer Review —	Complete → Obsolete

Version	5	Date:	12-Dec-2016	
Status	Template			25

Part state promotion

In order to promote an EBOM (it means a part with sub-components), the best practice is to use the dedicated icon in EBOM toolbar (see chapter "EBOM Approval").

In order to promote a part, the user can use the following functions:

- The dedicated portion in part header
- The icon contained in lifecycle toolbar
- The command contained in lifecycle menu Action

Drop Images here 000000105	Housing State: Preliminary Review Owner: Ination content Modified: Mar 29, 2016 12:14:01 PM
000000105 01	Properties Material Parts CMS Information Lifecycle Where
Bill Of Materials	Lifecycle
Change Management	000000105 rev 01: Lifecucle
Specs & Documents	
Related Parts	
Collaboration	L Promote
Manufacturing Details	Demote
Vendor Part Numbers	
CMS Information	

The functions are available only if the user has the permission to promote the part state.

In order to promote a part from one state to the following state, the following checks are performed:

- EBOM must not contain the same part (otherwise the system will create a recursive BOM)
- Drawings connected to part have to be at least in the state following the part state
- EBOM must contain only parts at least in the state following the part state
- Previous part revisions have to be at least in the state following the part state

The users involved in part promotion are the following:

- State Preliminary: Product Design Engineer or Electrical Design Engineer users can promote from state Preliminary to state Review
- State Review: Senior Product Design Engineer or Senior Electrical Design Engineer users can promote from state Review to state Approved
- State Approved: MBOM Engineer can promote from state Approved to state Publish

Version	5	Date:	12-Dec-2016	
Status	Template			26

In order to promote the part from state Review to Approved, the user has to enter an electronic signature. If the user tries to promote the part state without apply the signature, an error message is shown

Promotion Failed: Cannot promote - all requirements not satisfied
ОК

The tab Tasks/Signature contains the function to approve or reject the part:

Properties Material Parts	CMS Information	Lifecycle Where	Used Revision	s Versions	History	Images
Lifecycle						
0000000598 rev 00: Lifecycle						
≡· 🔽 🗖 🔆						
Pre	eliminary — — — R	eview App	roved I	Publish ———	Obsolete	
Tasks/Signatures Approvals						
🔽 🗔 🔚 - 🖓 🗟 🔆 -						
Show: All Approvals 🗸 Approval Sta	tus: All 🗸 Inc	lude: Current and Related	Tasks 🗸 Filter			
🔹 Name 🛆	Approver	Title	Approval St	atus Approv	al/Due Date	Comment
🖉 Senior Design Engineer	Senior Design Engir Test Everything	neer(Role)	Awaiting App	proval		

In order to enter the electronic signature, select the link Awaiting Approval or the link in Lifecycle form.

Version	5	Date:	12-Dec-2016	
Status	Template			27

The system opens a new window; the user has to select the checkbox Approve, enter an optional comment and select command Done

Approval	
😪 🔆-	
Fleids in red Italics are required.	
Approval	Senior Design Engineer
Comments	Part approved
Action	Approve Reject Ignore
	Done Cancel

After, the user has to promote the part state using the icon

In order to reject the part, user has to select the checkbox Reject, enter a comment and select command Done

Approval	
🚱 🔆 -	
Fleids in red Italics are required.	
Approval	Senior Design Engineer
Comments	Check EBOM: not completed
Action	O Approve Reject Ignore
	Done Cancel

After, the user has to demote the part state using the icon

Version	5	Date:	12-Dec-2016	
Status	Template			28

Part state demotion

The parts in state Preliminary can be changed (both information and EBOM) by all users with roles Product Design Engineer or Electrical Design Engineer. Users with these roles can promote the part state from Preliminary to Review.

Users with roles Senior Product Design Engineer or Senior Electrical Design Engineer can approve and promote the part state from Review to Approved. The same roles are allowed to demote the part state.

In order to demote a part (it means, from state Approved moves to state Review or Preliminary, in order to perform minor changes; **part in state Publish can't be demoted**), the user can use the following functions:

- The dedicated portion in part header
- The icon contained in lifecycle toolbar
- The command contained in lifecycle menu Action

Drop 0000000598	Button Stire : Preliminary Review Approved
here we Pair (00)	Modified : Feb 25, 2016 10:19:31 AM
000000598 00	Properties Material Parts CMS Information Lifecycle Where Used Revisions
Bill Of Materials	Lifecycle
Change Management	0000000598 rev 00: Lifecucle
Specs & Documents	
Related Parts	
Collaboration	Promote
Manufacturing Details	Demote
Vendor Part Numbers	
CMS Information	

If there are more parts to be demoted, users can use the function in Bill Of Materials page:

Drop Images here Part (00)	Switch variant white State : Preliminary	→ Approved
000000597 00	EBOM EBOM Common MBOM Plant Specif	Where L
Bill Of Materials	📃 - Reports - 🖉 🚵 🗖 🗊 💷 💷	Markup 🗸 🗌
Change Management	Name	State
Specs & Documents	Name Iype	State
Related Parts	ECI	Part Review
Collaboration	ECI	Part Review
Manufacturing Details	EC 1	Part Review
Vendor Part Numbers	EC 1	Part Review
CMS Information		

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Status	Template			29

Where Used

Properties Material Part	ts CM	S Informat	tion Lif	fecycle	Where U	sed F	levisions	Versions His	tory In	nages	Route		
EBOM 🖌 Actions -	Change	- Marku	ip - 🥒	-	-	•	2 7	Q 🗏 🔆	•				
Name	Levels	h.		F/N	Ref Des	Qty	Part Mode	Related ECR	Revision	Туре	State	Description	Rel
🖃 🗌 🔜 453051	-1	-		10	^	1.0	Un-config		00	Part	Publish	BRAKE DUAL CCT 3MM	EBOM ^
⊟ □ ➡ 453050	-1			10		1.0	Un-config		00	Part	Publish	BRAKE DUAL CCT 2.5MM	EBOM
= _ 453095	-1	k.		10		1.0	Un-config		00	Part	Publish	ATL BRAKE SWITCH	EBOM
🖃 🗔 👪 SAS-453050	-1	R _o		10		1.0	Un-config		00	Part	Publish	SUB.ASS.SOCKET	EBOM
- - 4 53054	-1			10		1.0	Un-config		00	Part	Publish	BRAKE DUAL CCT 3MM	EBOM
🖃 🔲 👪 SAS-453051	-1	R _o		10		1.0	Un-config		00	Part	Publish	SUB.ASS.SOCKET	EBOM
= _ 453096	-1	h _o		10		1.0	Un-config		00	Part	Publish	ATL BRAKE SWITCH	EBOM
e 🗋 💀 453053	-1			10		1.0	Un-config		00	Part	Publish	BRAKE DUAL CCT SWIT	EBOM
= 🗌 🔜 453056	-1			10		1.0	Un-config		00	Part	Publish	SWASY CL MLTPL FUN	EBOM
🖃 🗔 👪 SAS-453052	-1	R _o		10		1.0	Un-config		00	Part	Publish	SUB.ASS.SOCKET	EBOM
🖃 🗌 👪 SAS-453053	-1	h _o		10		1.0	Un-config		00	Part	Publish	SUB.ASS.SOCKET	EBOM
= 🔤 👪 453052	-1	H _o		10		1.0	Un-config		01	Part	Preli	BRAKE DUAL CCT SWIT	EBOM
<pre>452007</pre>	-1 K	io		10		10	Un-config		00	Port	Publich		
													13 objects

Form shows the Engineering Bill Of Materials that contains the part



The table shows if the parent part has no parents (icon

) and if there is an active Change Request (icon

ß

The toolbar contains the commands used to create a Change Request, in order to perform a massive update (see document "Engineering Change Training").

The table and the toolbar used to implement the function Where Used for a Manufacturing Part (an intermediate part or a material part) are different: the table shows the MCO used to implement the Manufacturing Bill Of Material and the Start Effectivity Date, whereas the icon related to parents and Change Requests are available.

Version	5	Date:	12-Dec-2016	
Status	Template			30

Properties CMS Informa	tion Lifecycle	Where Used History	Imag	es R	oute						
Add To 🗸 🛄 🗸 🗔	- 📰 - 🔜 🚺	💎 🚱 🗐 🔆 -									
	Part Revisions		BOM Att	ributes							
Level	Name	Description	F/N 🔺	Ref Des	Quantity	Seq	Start Date	End Date	Add	Remove	Manufacturing Usag
E Material Part 090100 00	B 090100	DURETHAN BKV 30H 1									^
÷ -1	52468-01	PLUNGER	1		0.1466	1	Jan 1, 2	Jan 1,	MCO-0022275		
	52468-02	PLUNGER	1		0.1577	1	Jan 1, 2	Jan 1,	MCO-0022306		
.1	56151-00	HOUSING	1		0.0013	1	Feb 14,	Dec 3	MCO-0008477		
	52367-00	SOCKET	1		0.2625	1	Jan 1, 2	Jan 1,	MCO-0008498		
÷ -1	52052-08	SOCKET	1		0.2242	1	Jan 1, 2	Jan 1,	MCO-0008712		
	52471-02	HOUSING	1		0.4014	1	Jan 1, 2	Jan 1,	MCO-0008760		
÷ -1	52059-03	BULB HOLDER HSG	1		0.1957	1	Jan 1, 2	Jan 1,	MCO-0009732		
	52131-06	SPACER	1		0.0463	1	Jan 1, 2	Jan 1,	MCO-0009320		
.1	52628-03	MAGNET HOLDER	1		0.1872	1	Jan 1, 2	Jan 1,	MCO-0009396		
± -1	52222-02	HOUSING	1		0.9224	1	Jan 1, 2	Jan 1,	MCO-0009142		
÷ -1	52627-02	SOCKET	1		0.4854	1	Jan 1, 2	Jan 1,	MCO-0009185		
< >	<										>
											61 objects

Version	5	Date:	12-Dec-2016	
Status	Template			31

Revision

The table shows all part revisions; the table contains also the Sketch part used to create the EC part.

P	roperties Material Parts	s (CMS Information Life	ecycle Where Used	Revisions Versions	History Image	s Route
Ó	° 📮 🗔 - 📰 - 🜉	7	😫 🗏 🔆 -				
Nan	10 🔺	Rev	State		Туре		Revision Comments
10	000000010	А	Complete		Sketch Part		
	000000010	00	Publish		EC Part		
	000000010	01	Publish		EC Part		PCB changed for Supplier request

During part revision creation, a revision comment is mandatory. User can changes the revision comment, if user has the permission, using the dedicated icon contained in the toolbar



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Status	Template			32

Versions

When a new RFQ is related to an EC Part (for example, when RFQ is related to an Engineering Change or a Volume Uplifts), Engineer has to provide a new version of EBOM, in order to describe the proposal and provide an estimation. In this case, the Change Request doesn't exist and so there is no a new part revision that can be used to update the EBOM.

Using the tab Version, the user can create a new Sketch part (called "Version Part"), starting from EC Part, as a copy of original part. The Version Part could be updated, without perform any changes on original EC Part. When RFQ will be approved and Change Request will be approved, the Engineer will be able to compare the EC Part and the Version Part, in order to sync the changes from Version Part to EC Part.

	Modified : Apr 4, 2016 1	12:29:28	PM		
453050 00	Properties Material Part	S	CMS Information Lifecycle	Where Used Revisions V	Versions History »
Bill Of Materials	* 🖻 🖉 🗔 🗍 -	0 -	📰 - 📃 🖉 🏹 🔮 🗮	☆-	
Change Management		-			
Specs & Documents	Name 🔺	Rev	State	Туре	Revision Comments
Related Parts	453050	00.A	Create	Sketch Part	
Collaboration					
Manufacturing Details					
Vendor Part Numbers					

The table shows all Version Parts, created during a RFQ or during a Change Request.

The Version Part has the same name of the original EC Part; the revision instead is composed by the revision of original EC Part with a suffix ".A".

The Version Part can be revised (like the Sketch Parts); in this case, the revision will change the suffix from ".A" to ".B".

The Version Part can be created from part details or inside the command Variants, in RFQ details.

Create Version Parts from part details

Search for the EC Part, select command Version from part header

	Modif	ied : Apr 4, 2016 12:2	9:28 PM						
453050 00	Properties	Material Parts	CMS In	formation	Lifecycle	Where Used	Revisions	Versions	History
Bill Of Materials	* 🗷 🥒	🗖 🔍 - 🖪	- == -	5	7 😪 🗐				
Change Management	<u> </u>					• •			
Specs & Documents	Name 🔺	R	ev State			Туре		Revision	Comments
Related Parts						No	Objects Found		
Collaboration									

Version	5	Date:	12-Dec-2016	
Status	Template		3	3

After creation, the system alerts the user the Version Part is created and updates the table



	Modified : Apr 4, 2016	12:29:28	3 PM		
453050 00	Properties Material Part	S	CMS Information Lifecycle	Where Used Revisions V	ersions History »
Bill Of Materials	* 🖻 🖉 📮 斗	-	📰 • 🔜 🖉 🏹 🚱 🗮	☆-	
Change Management		· · ·			
Specs & Documents	Name 🔺	Rev	State	Туре	Revision Comments
Related Parts	453050	00.A	Create	Sketch Part	
Collaboration					
Manufacturing Details					
Vendor Part Numbers					

Create Version Parts from command Variants in RFQ details

Sales Manager has created a RFQ and has defined the variants involved in quotation

L	the 2 gang generic switch: Modified : Apr 4, 2016 12:36:20 PM									
RFQ000010-01	≡ - 〃 📪 - 圖 - 🗒 🖉 🏹 🖼 🔆 -									
Folders		Rev	Туре	Description	Similar Parts	State	Product	Program	Current Price	Та
Variants			-916-5							
Estimated Volumes	453050	00	EC Part	BRAKE DUAL CCT 2.5MM		Publish			0.0 Dollar	
Lifecycle										
Members										

The menu Action contains the command Create Version: user has to select EC Part and select the command



Version	5	Date:	12-Dec-2016	
Status	Template			34

After creation, the RFQ contains the new Version Part instead of original EC Part



If the Version Part was created using the first approach (starting from part details), the system alerts the user that the Version Part already exists; in every case, the RFQ will be updated with the Version Part.

Part <453050>: version 00.A a	Iready exists additional dialogs
	OK

Version Parts are governed by the same policy used for Sketch Part; also the functions used to manage them are the same. About functions available, see chapter "CBOM management".

The only difference with Sketch Part is related to command "CBOM to EBOM upgrade"; the command is used to translate a Sketch Part into an EC Part. Since the Version Part is created starting from an EC Part, the function can't be used with Version Part. If a user tries to translate a Version Part, the system cancels the operation and shows an alert.

The selected part is a version: can't be translated to EC Part !!
ОК

Version	5	Date:	12-Dec-2016
Status	Template		35

History

The table shows all actions performed on part information, connection with other PLM objects and lifecycle:

Properties Material P	arts CMS Informa	ation Lifecycle	Where Use	d Revisions	Versions	History	Images	Route		
0000000010: History Re	evision									
📮 🔆 -										
Action Type *	and	* Fil	ter							
Date 🕢	User	Action	State	Description						1
Dec 23, 2015 9:14:51 AM	Test Everything	Create	Preliminary	revisioned from: F	Part 00000000	10 00A				_
Dec 23, 2015 9:14:51 AM	User Agent	Connect	Preliminary	ry Part Revision from Part Master 0000000010 Part						
Dec 23, 2015 9:14:51 AM	User Agent	Connect	Preliminary	Part Specification	to CAD Drawir	ng test custo	mer drawing	00A		
Dec 23, 2015 9:14:52 AM	User Agent	Connect	Preliminary	Part Specification	to CAD Drawin	ng 00000000	10 00A			
Dec 23, 2015 9:14:52 AM	Test Everything	Modify	Preliminary	All Level MBOM Generated: FALSE was: TRUE						
Dec 23, 2015 9:14:53 AM	Test Everything	Modify	Preliminary	PDS_RevisionCo	mments: test r	new revision	was:			
Dec 23, 2015 9:14:53 AM	Test Everything	Modify	Preliminary	PDS_PartClassif	ication: Switche	es was:				
Dec 23, 2015 9:14:53 AM	Test Everything	Modify	Preliminary	PDS_RawMateria	Classification	: Acetal Resi	ns (POM) wa	S:		
Dec 23, 2015 9:14:53 AM	User Agent	Change	Preliminary	project: GLOBAL	was: GLOBAL					
Dec 23, 2015 9:14:53 AM	User Agent	Change	Preliminary	organization: MET	HODE ELECT	RONICS wa	S: METHODE	ELECTRONICS		
Dec 23, 2015 9:15:25 AM	UserAgent	Connect	Preliminary	Change Affected I	tem from Char	nge Action C/	-0000256 -			
Dec 23, 2015 9:16:16 AM	User Agent	Connect	Preliminary	Manufacturing Re	sponsibility fro	m Plant Mali	a -			
Dec 23, 2015 9:16:17 AM	User Agent	Connect	Preliminary	Manufacturing Re	sponsibility Ch	nange from C	hange Action	n CA-0000256 -		
Dec 23, 2015 9:16:34 AM	Test Everything	Promote	Review							
Dec 23, 2015 9:16:44 AM	Test Everything	Approve	Review	signature: Senior	Design Engine	eer commen	t: EBOM Aprp	ved		
Dec 23, 2015 9:16:44 AM	Test Everything	Promote	Approved							
Dec 23: 2015 9:16:53 AM	Test Everything	Promote	Publish							¥

The table contains the following information:

- Date when action was performed
- User name
- Action
- Part state, when action was performed
- Action description, created automatically by system

Description values depend on action type: in case of an attribute update, the description contains the attribute name, previous and new values, in case of connection, the description contains the name of connection and the PLM objects connected.

The toolbar contains two filters:

- Action Type
- A field to filter description

In order to search for all actions related to a particular type, select the icon "..."



Version	5	Date:	12-Dec-2016	
Status	Template			36
Select the action type to query and select command Done

Select Action Types
≫-
Action Type
✓ add interface
✓ Approve
Change
✓ Change Owner
Connect
Create
Demote
✓ Disconnect
Modify
✓ Promote
✓ remove interface
\frown
Done

In order to search for actions containing a particular string, enter the string to search and select command Filter: the table is updated.

000000010: History Revision

Action Type *	and Drawing	Filter					
Date /	User	Action	State	Description			
Dec 23, 2015 9:14:51 AM	UserAgent	Connect	Preliminary	Part Specification to CAD Drawing test customer drawing 00A			
Dec 23, 2015 9:14:52 AM	User Agent	Connect	Preliminary	Part Specification to CAD Drawing 000000010 00A			
Jan 28, 2016 3:32:05 PM	UserAgent	Disconnect	Publish	Part Specification to CAD Drawing test customer drawing 00A			
Jan 28, 2016 3:32:05 PM	User Agent	Disconnect	Publish	Part Specification to CAD Drawing 0000000010 00A			
Mar 4, 2016 2:09:28 PM	Matthew Spiteri	Connect	Publish	Part Specification to CAD Drawing P-0000000010 00A			

In order to remove the filter, remove the string from field and select command Filter.

Version	5	Date:	12-Dec-2016	
Status	Template			37

Image



Page shows all images related to part:

Toolbar contains the following functions:

Create: allows

 \times

Create: allows users to upload an image

Make Primary: allows users to define the primary image (used in part header and Bill of Material, in Thumbnail mode)

Delete: allows users to remove an image from PLM (the image will be no more available)

Version	5	Date:	12-Dec-2016	
Status	Template			38

Route

Route is a process created by users, in order to implement an approval process, in addition to electronic signature already implemented in lifecycle process.

The main difference between route and lifecycle is that electronic signature in lifecycle is mandatory (when a part is created, the lifecycle is automatically assigned part, so the electronic signature is always created), whereas route is created manually by users (it means the route process is optional, it depends on user if route is created or not).

Properties Material Parts **CMS** Information Lifecycle Where Used Revisions Versions History Images Route = · 🗔 🔍 - 🗟 • 🗃 • 📄 🖉 🏹 🚱 🗮 🔆 • Name 🔺 **Route Status** Due Date Description Owner 🗌 🏠 &R-0000266 Not Started Approve part Matthew Spiteri Ē

The table shows all routes defined for part approval process.

Menu Action contains the commands to create new route, start or resume an existing route not started, remove or delete an existing route.



In order to define an approval process, Design Engineer has to create a Route process:

- Select command «Routes and Approvals»
- Select one of the commands available in Action menus
- <u>Create Route</u>: this process allows users to select a Route Template, if a predefined list of users is defined; task description is equals to all users and task execution is in parallel

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Status	Template			39

- <u>Create Route Wizard</u>: this process allows users to specify each task and people involved: user can select people from a template or from a query, can specify for each user a different task description, can select task execution in parallel or sequential
- <u>Create Simple Route</u>: this process is the simplest one: users can select a list of people from a query (PLM Administrator can define a Member List if a predefined list of users is defined) and a Due Date; task description is equals to all users and task execution is in parallel
- <u>Manage Route Approvals</u>: this process allows users to select a Route Template, if a predefined list of users is defined; task description is equals to all users and task execution is in parallel

Create Route

CR-0000117 Create Route					
*≁					
	Fields in red italics are required				
Туре	Route				
Name	☑ AutoName				
Template	CN: Review Content Clear				
	Review CN				
Description					
Route Base Purpose	Review 🗸				
	OAII				
Scope	 Organization 				
	O Select Scope				
Route Completion Action	Notify Route Owner				
Auto Stop On Rejection	Immediate 🗸				
	Done Cancel				

Attribute details:

- Route Name: autoname is provided

	*.				
		Fleids in red Italics are required			
	Туре	Route	\sim		
	Name		✓ AutoName		
Vers	sion	5	Date:	12-Dec-2016	
Stat	us	Template	•	•	40

 Template: select the list of users involved in approval process (the templates are defined by PLM Administrator)

Search Refinement		Search R	Results 1 - 11	of approx. 1	1 Results Page Size: 50 🕨 (Max Value: 1000) 🕬 4 1 🕨 🕬
Q	Ø	e Q	∖ - ▶- 🗔-	-	■ ※-
By State: TRUE State: Active		Name 🔺		Revisio	n Description
	^	Or∰ CN	l approve test	1	CN approve test
 Taxonomies 		Or∰ CN	I Change Request Cl	1	CN Change Request CM Approval
▼ Types		<u>O</u> r∰ CN	V Change Request LM	1	CN Change Request LM Approval
Route Template(11)	(Or∯ CN	Review Content	1	CN Review Content
 Attributes 		⊖ 🏶 Dev	eviation Approval	1	Deviation Approval
Manua		⊖r∰ EB	80M Approve	1	EBOM Approve
Name		⊖ 🖗 EB	30M Review	1	EBOM Review
Originated		GAT	TE Approve	1	GATE Approve
Modified		⊖ 🍪 GAT	TE approve test	1	GATE approve test
Description		Or∰ MB	3OM Approve	1	MBOM Approve
Commont		Or∰ MB	BOM approve test	1	MBOM approve test
comment		<		<	
LABEL 2	> ×	_			Submit

- Description is mandatory

Route Base Purpose: select Review because the route is used to add information, not for an approval



- Scope: determines who can be added to route tasks; leave All or Organization
- Route Completion Action: select Notify Route Owner because the route is for review, not for an approval (option "Promote Connected Object" will be used in route for approval)

Route Completion Action	Notify Route Owner	
	Notify Route Owner	
	Promote Connected Object	

- Auto Stop On Rejection: if a user involved in route doesn't approve the task, all other tasks are closed (Immediate) or have to be evaluated (Deferred)

Auto Stop On Rejection	Immediate 🗸		
-	Immediate		
	Deferred		

The route created is not started automatically

Version	5	Date:	12-Dec-2016	
Status	Template			41

est	Test for process State : C Owner : jo Modified : 1	reate ← Evaluate → In Review e.budgeja Mar 18, 2016 3:04:23 PM	W Drop files here	ent title(
	Properties Process Deta	ails Affected Items Cha	ange Actions Reference Do	cumen Review Ro	utes Hist
	□ ▲	Name 🔺	Route Status	Due Date	Descriptio
	□�	- ⊕ R-0000258	Not Started	·	CN Revie

Create Route Wizard

The process is composed by 4 steps:

- Define route type and if route has to be executed immediately
- Define people involved
- Define tasks
- Define approval for concurrent tasks

Define route details

Step 1 of 4: Specify	Details					
Add Content	Remove Sele	cted 🕅 🔆 🕶				
Fleids in red Italics are required.						
Name		✓ A	utoName			
Template			<u>Clear</u>			
Description						.::
Route Base Purpose	Standard ¥					
Scope	 All Organizat Select Sci 	All Organization Select Scope				
Route Completion Action	Notify Route O	wner 🗸				
Start Route	OUpon Wizar	rd Completion				
Auto Stop On Rejection	Immediate 🗸					
Content						
Name 🗡		Rev	Ver	State Condition		
CR-0000163		-		Evaluate V		
					Next	Cancel
/ersion		5		Date:		12-Dec-20
Status		Template				

42

Attribute details (other than attributes described in "Create Route")

- Start Route: select Upon Wizard Completion to start route immediately after route creation; select Manually if user wants to adjust tasks and people involved

There is also a section related to route contents, that is used to approve or review different objects (by default, the part used to start the process is added as content)

🛞 🛛 10.1.68.28:8111/3dspace/components/emxRouteWizardCreateDialogFS.jsp?templateId=null&template=&objectId=7 🛛 🦗 🖌
Step 1 of 4: Specify Details
Add Content 🚔 Remove Selected 🔆
Fleids in red Italics are required.

Content			
Name 🖉	Rev	Ver	State Condition
CR-0000163	-		Evaluate 🗸
			North Council
			Next Cancel

Define people involved: select command Next.

If a template was selected in first page, the user contained in template definition are already added to route definition

Step 2 of 4: Select Route	Step 2 of 4: Select Route Members							
Actions -	Actions -							
Name 1	Туре	Organization	1	Scope	Access			
📋 Barbara, Johann	Person	METHODE E	LECTRONICS	All	Add Remove	~		
Spiteri, Matthew	Person	METHODE E	LECTRONICS	All	Add Remove	~		
				Previous	Next	Cancel		
Version	5		Date:	12-De	c-2016			
Status	Template					43		

Step 2 of 4: Select Route Members ×. Actions -Add People уре Organization Scope Access Add Role METHODE ELECTRONICS Person All Add Remove ¥ Add Group METHODE ELECTRONICS All ¥ Person Add Remove Add Member List Read Remove Selected Read Write Add Remove Add Remove Cancel Previous Next javascript:void(0)

Users can add other users using commands contained in Actions menu.

Version	5	Date:	12-Dec-2016	
Status	Template			44

Define tasks: select command Next

Step 3 of 4	4: Define Route Tasks		
Actions -] ≫~-		
Title,	Action & Order	Assignee & Instructions	Due Date & Time (EDT)
Action Com Orde	on ment v er	Grima, Samantha	 S:00 PM Clear Advanced day(s) from Route Start Date Assignee-Set Due Date Allow Delegation Requires Owner Review
Revi	iew CN ment v er	Spiteri, Matthew	 S:00 PM Clear Advanced day(s) from Route Start Date Assignee-Set Due Date Allow Delegation Requires Owner Review
Revi	iew CN on ment V er	Barbara, Johann V Review CN	Clear Advanced day(s) from Route Start Date
			Previous Next Cancel

For each user defined in previous page, a route task is created.

For each route task, users has to define:

- Title and instructions: mandatory; the attributes are already defined for tasks created from template; for other task, values are to be defined
- Action: in case of route of type Review, action is Comment; in case of approval process, select Approve
- Order: default value 1 means all tasks are executed in parallel; defining different orders means define dependencies between route tasks
- Due Date and Time: estimated finish date
 - Can be defined as a date

Version	5	Date:	12-Dec-2016	
Status	Template			45

•	 5:00 PM	~
Clear		

o A number of slip days after route start date

0	day(s) from	
Route Start Da	ate 🗸	

o When the route start

Assignee-Set Due Date

- Users can define if task can be delegated

Allow Delegation Review

- Users can define if it's necessary another review by users in order to complete the task

Requires Owner

Define approval for concurrent tasks: select command Next

Step 4 of 4: Action Required					
*≁					
Order	Name	Action	Action Required		
1	Review CN	Comment	⊖Any@All		
1	Review CN	Comment			
1	Review CN	Comment			
			Previous Done Cancel		

- Any: when one person completes a task in the set of concurrent tasks, all other tasks with same order level are deleted.
- All: all tasks in the set of concurrent tasks must be completed

Create Simple Route

Version	5	Date:	12-Dec-2016	
Status	Template			46

Create Simple Route			
Add Content Remove Selected	⅔-		
Fleids in red Italics are required.			
Route Details			
Instructions		.ai	Action Comment V Due Date Start Route Immediately Allow Delegation
Route Task Recipients			
		^	🔗 Add Role
			🍖 Add Group
			🕼 Add People
			🚰 Add Member List
Properties Remove		Ť	
Content			
Name A	Rev	Ver	State Condition
CR-0000163	-		Evaluate ¥
<			Done Cancel

Attribute details:

- Instructions: description of task
- Action: Comment, Approve, Standard; in this case, select Approve
- Due Date: estimated finish date for all tasks
- Start Route Immediately: if selected, route starts after user select command Done, otherwise has to be started manually
- Allow Delegation: if people involved can delegate tasks
- Route Task Recipients: users can use the command Add Role, Add Group, Add People and Add member List in order to define people involved

Version	5	Date:	12-Dec-2016	
Status	Template			47

Manage Route Approvals



Define a Route between states Create and Review, using a Route Template.

Manage Route f	Abbrovalz	
States	Existing Routes	New Route
Create Review Complete	,	Not allowed for past states
		Apply Done Cancel

Search Refinement	ch Results 1 - 8 of approx. 8 Results Pag	ge Size: 50) (Max Value: 1000) 🔤 4 1
	Q- 🕨 - 📰 - 🔜 🗮 🖇	£-
State: Active	Revision Descri	ption
 Taxonomies 	CN approve test 1 CN app	prove test
▼ Types	CN Change Request CM / 1 CN Cha	ange Request CM Approval
🗁 🗹 Route Template(8)	CN Change Request LM / 1 CN Cha	ange Request LM Approval
 Attributes 	CN Review Content 1 CN Rev	view Content
Namo	GATE Approve 1 GATE	Approve
Name	GATE approve test 1 GATE	approve test
Originated	MBOM Approve 1 MBOM	Approve
Modified	MBOM approve test 1 MBOM	approve test
Description		
Commant >	> <	Submit

Version	5	Date:	12-Dec-2016	
Status	Template			48

A Route Template is a list of users and/or roles that has to approve the Gate.

Tasks/Signatures	Approvals				2 ²
🗹 📮 🗔 -	7 🗟 🔆 -				
Show: All Approvals	V Approval Status: All V	ter			
🚯 Name 🛆	Approver	Title	Approval Status	Approval/Due Date	Comments/Instructions
IT-0000040	LT Senior Lab Technician(Role)	Approve Gate	Awaiting Approval	,	Approve Gate
🗹 IT-0000041	OM Senior Operations Manager(Role)	Approve Gate	Awaiting Approval		Approve Gate
🗹 IT-0000042	QE Senior Quality Engineer(Role)	Approve Gate	Awaiting Approval		Approve Gate
🗹 IT-0000035	AM Senior Account Manager(Role)	Approve Gate	Awaiting Approval		Approve Gate
🗹 IT-0000036	LM Senior Launch Manager(Role)	Approve Gate	Awaiting Approval		Approve Gate
🗹 IT-0000037	ME Senior Manufacturing Engineer(Role)	Approve Gate	Awaiting Approval		Approve Gate
IT-0000038	PDE Product Design Engineer(Role)	Approve Gate	Accept		Approve Gate
🗹 IT-0000039	PURCH Senior Purchasing(Role)	Approve Gate	Awaiting Approval		Approve Gate

As for task approval, each user involved has to approve or reject the part (if approval task is assigned to a role, all users belonging to role can accept and approve the task).

If the part approval is rejected, the user can modify the checklist and resume the Route process

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Status	Template			49

Update and start route manually

If route process is not started, Gate assignee can modify it in order to add or remove people involved, change route instruction and people access.

Select link related to route

Content Collaboration	Properties Process	Details Affected Items Cl	nange Actions Referen
Impact Analysis		Name 🔺	Route Status
	- 7	-⊕R-0000258	Not Started

The page with route details contains several tabs:

R-0000258 CN Review Co	ontent Owner: joe.bud Modified: Mar 1	geja 8, 2016 3:35:47 PM		
R-0000258	Properties Cor	itent Access Discussions History		
	≡ • □			
	Name	R-0000258	State	Not Started
	Owner	Joseph Bugeja	Scope	Organization
	Description	CN Review Content	Template	📽 CN Review Content
	Originated	Mar 18, 2016	Route Base Purpose	Review
	Route Completion Action	Notify Route Owner	Auto Stop On Rejection	Immediate
	Tasks (Graphical) R-0000258 : Tasks (R Image: Comparison of the second	Tasks (Graphical)	3	

- Properties shows attribute details
- Content shows objects affected by route process (in this case, the Gate)
- Access shows people involved and allows Gate assignee to modify access and add people

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Status	Template			50

- Tasks shows tasks and people involved and allows Gate assignee to add people and tasks

To start manually a route, select tab Route and select checkbox related to route

In order to start the route and notify people involved, from tab Route select the checkbox related to route created



Select command Start/Resume from Actions menu



Gate assignee can also delete a route already created, in order to create another one with different people involved

Version	5	Date:	12-Dec-2016	
Status	Template			51

ENG03 Part Categories

Purpose	Part categories overview	Status	Define
Stakeholders	Design Engineers		
Beginning	Search and select a part		
Interactions			
End			
Constraints			

The following list contains all command available for a part; command access depends on user role and permission

·	1	IVIOUII	eu . Mai 4, 2016 0.01.0	o Pivi
000000010 00	Properties M	aterial Parts	CMS Information	Lifecycle
Bill Of Materials	🖉 🔊 🔓 🤌	» 🗊 📋 🗖	↓ 🚱 🔆 -	
Change Management	Name	000000010		Revision
Specs & Documents	Originator	Test Everythin	g	Originated
Related Parts	Part Classification			Quality Relea
Collaboration	Description	V1 Switch volu	ime scenario 1	, · · · · · ·
Manufacturing Details	Design Purchase	Design		Long Lead Ti
Vendor Part Numbers				Component
CMS Information	End Item	Yes		CMS Part Sta
Tool Parts	Technical			
	Net Weight	0.0		Gross Weigh
Referenced By	Carry Over Parts			Remarks
Classification PowerView	Similar Parts			
Issues				
	01 7 6 0 0			

- Name: part name, link to the page with summary of part attributes (see chapter "Part Info Details")
- Bill Of Material: using this tab is possible to browse the BOM structure. It's composed by:
 - o EBOM
 - o EBOM Common (EBOM with Substitute and Alternate parts, if defined)
 - MBOM Plant Specific
 - Where Used (same command contained in Part Info Details)
 - o Markups
- Change Management: the tab contains information related to Change requested on part
 - o Change Order
 - o Change Request
 - Change Legacy
- Specs & Documents: the tab contains information related to Drawings and Documents related to part
 - Specifications

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Status	Template			52

- o Reference Documents
- Related Parts: the tab contains existing parts that are connected to current part
 - Alternate Parts
 - Substitute Parts
 - Spare Parts
 - \circ Derived to
 - Derived From
- Collaboration: the tab contains information related to processes that involves other users
 - o Route
 - o Issues
 - Subscribe
- **Manufacturing Details:** the table shows information related to plant where the part is used (Malta and Egypt)
- Vendor Part Numbers: the table shows information related to Vendor Part Numbers defined in CMS
- **CMS Information:** the page shows information related to Customer Part Numbers and costs information defined in CMS
- Tool Parts: the table shows the tool parts used to produce the part
- **Referenced by:** the table shows all PLM objects connected to current part, not only parts in Bill Of Material and drawings (for example: RFQ, products, Change already implemented, etc.)
- Classification Power View: this page allows the users to classify a part
- **Issues:** the tab contains the issues created on current part

Bill Of Material

Page shows information related to EBOM (Engineering Bill Of Material), EBOM Common (EBOM with also Substitute and Alternate parts), MBOM (Manufacturing Bill Of Material), Markups (proposed changes in EBOM, used during Change Request process)

EBOM

The tab shows the EBOM (Engineering Bill Of Material)

453050 00	EBOM EBOM Common MBOM	Plant Specif Routing Whe	re Used Markups							
Bill Of Materials	🔲 - Reports - 🖉 🛓 🍰	L 國 Markup 🗸 🥱 🛤 💼	Change 🗸 👘 - 🗼 - 🚎 🗖		•	- -		276	≣ %-	
Change Management	Mama		Manufacturing Posponsibility	Type	State	Roy	E/N	Oty	HofM	Description
Specs & Documents	Name a m		manufacturing Responsibility	Type	State	Kev	r/m	QUY	0.01 M	Description
Related Parts		🛱 00A (M.Flow Chart-A)								
Collaboration	= 🗌 👪 453050	9 03.1 (MEM Assembly Drawing)	Malta	EC Part	Publish	00			PCS - PI	BRAKE DUAL C
Manufacturing Details		(Inc. (Inc. in a second style statistics)								
Vendor Part Numbers		b								
CMS Information		09N (MEM Component)	Malta	EC Part	Publish	00	1	1.0	PCS - PI	HOUSING - BR/
Tool Parts	63551-01		Malta	EC Part	Publish	00	10	1.0	PCS - PI	TERMINALA
Referenced By		o IG (MEM Component)	11-11-	FORd	Dublish	00	44		DOD DI	
Classification PowerView			Maita	ECPart	Publish	00		1.0	PC5-PI	MAIN SPRING
Issues	63566-01	🛱 01C (MEM Component)	Malta	EC Part	Publish	00	12	1.0	PCS - PI	LEAF SPRING
	🖃 🛄 👪 C40768-01		Malta	EC Part	Publish	00	13	1.0	PCS - PI	PLUNGER SPR
	■ □ ➡ 52822-04	🛱 04I (MEM Component)	Malta	EC Part	Publish	00	14	1.0	PCS - PI	SLIDER
	E 🔲 🔀 52581-01	🛅 01K (MEM Component)	Egypt, Malta	EC Part	Publish	00	15	1.0	PCS - PI	PLUG
	E 🗋 🔀 52821-01	🛱 01F (MEM Component)	Malta	EC Part	Publish	00	2	1.0	PCS - PI	COUPLER - BR
	■ □ ➡ 52820-01	8 01F (MEM Component)	Malta	EC Part	Publish	00	3	1.0	PCS - PI	CAM - BRAKE
	< > <									>
	Filter:Info 1: Description and Make-Buy									16 objects

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Status	Template			53

The EBOM is composed by several tables; the default table shows the following information:

- Name: part name, link to the page with summary of selected part attributes

Change Notice: icon to show if there is a CMS Change Notice related to part

- End of the change Request: icon to show if there is an active Change Request related to part
- 🖆 Drawings: icons to show if there are drawings connected to part, with also the information related

to state (icon means drawing released, icon 🤽 means drawing not released), drawing revision and drawing type

- Manufacturing Responsibility: available only to MBOM Engineer, shows plants where parts is used
- Type: can be Sketch Part or EC Part
- State: part state
- Rev: revision
- F/N: position in EBOM, mandatory before promote to following state
- Qty: quantity in EBOM
- Description: part description
- Design-Purchase: if part is designed or purchased (information provided by Engineering)

In order to view the other tables used to show EBOM information, select icon from toolbar.

* Create New Table View	(
All Info	Ľ
CMS Info	
Costs Info	
Electronic Component View	
Engineering	1
Info 1: Description and Make-Buy	1
Info 2: Weights	l.
Info 3: Carry Over and Similar	1
Parts Info 4: Remarks	1
Info 5: Raw Materials Info	1
Packaging Info	1
Techs Info	

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Status	Template			54

Info 1, Info 2, Info 3, Info 4, Info 5: tables with Technical information splitted in order to avoid "scroll"

Table Info 1: Description and Make-Buy is the default table

Table into 2: weights										
EBOM EB	OM Common	MBC	OM Plant Specif	Routing	Where Used	Markups				
Reports	· 🥒 🛓		🔁 🔟 Markup -	> A	🚹 Change 🗸	* • • =	🗔 🏽 🎝 🖓	- -	🗗 🔜 🖉 🏹 🚱 🤊	>
Name		Rev	Description		Net Weight Uo	м	Net Weight		Gross Weight	
= 🗌 🔜 4530	50	00	BRAKE DUAL CCT 2	2.5MM	KG		·	0.036		۲ م
🕀 🖂 📑 52	323-09	00	HOUSING - BRAKE(2.5MM SW PT)			0.0		C
i 🗆 🔤 63	51-01	00	TERMINAL A					0.0		c
🖃 🗆 🔜 C4	0757-00	00	MAIN SPRING					0.0		C

Table Info 2: Weights

Table Info 3: Carry Over and Similar Parts

	EBOM	EBOM Common	MBC	OM Plant Specif	Routing	Where Used	Markups				
-	📃 - Reports - 🥒 🛓		Ľ	🔁 🔟 Markup -	•	Change -	* * * * = 📮	🗸 🎝 · 🗍 -		2	7 😪
	Name		Rev	Description			Carry Over Parts		Similar Parts		
		453050	00	BRAKE DUAL CCT 2	2.5MM						
	± 🗌 🖩	52823-09	00	HOUSING - BRAKE(2.5MM SW PT	Γ)					
		63551-01	00	TERMINAL A							
		C40757-00	00	MAIN SPRING							

Table Info 4: Remarks

	EBOM	EBOM Common	MBC	M Plant Specif Rou	iting V	Vhere Used	Markups			
Ξ	- R	eports 🗸 🖉 🛓		🔁 國 Markup 🗸 🖉	9 A	Change 🗸	* • • =	, & .	- 📑 -	- 🔜 🛃 🏹
	Name		Rev	Description		Remarks		Ref Des		Comp. Loc.
-		453050	00	BRAKE DUAL CCT 2.5MM	И					
	•	52823-09	00	HOUSING - BRAKE(2.5MI	M SW PT)					
		63551-01	00	TERMINAL A						
		C40757-00	00	MAIN SPRING						

Table Info 5: Raw Materials Info

	EBOM	EBOM Common	MBOM Plant Specif	Routing WI	nere Used Ma	arkups				
= - Reports - 🖉 🛓		eports 🗸 🖉 🛓	Markup -	• 🗛 🗖	Change 🗸 🏼		- # # #•]- I - II-	🔜 🖉 🏹 🚱	»
	Name		Description	Painting	Laser Etching	Plating	Base Materials	Plating Materials	Painting Materials	
-		453050	BRAKE DUAL CCT 2.5MM	FALSE	FALSE	FALSE				
	• 🗆 🔣	52823-09	HOUSING - BRAKE(2.5M	FALSE	FALSE	FALSE				1
		63551-01	TERMINALA	FALSE	FALSE	FALSE				1
		C40757-00	MAIN SPRING	FALSE	FALSE	FALSE				1

Table Electronics Component View

	EBOM	EBOM Common	MBOM F	Plant Spec	if Ro	outing	Where Used	Markups					
	- Re	eports 🗸 🖉 🏄	\$	30 N	larkup +	9	Change -	* * * *	- 🗔 🏯 🎝	- -	• - :::-	, 🚺	ኛ 🚱 »
] Name			F/N	Qty	Ref Des	DesignPurchas	e Component Type	Manufacturer Part I	Number	Manufacturer	Package	Estimated Cost
-	-	453050	CT 2.5MM				Design						0.0 Dollar
	•	52823-09	KE(2.5M	1	1.0		Design						0.0 Dollar
		63551-01		10	1.0		Purchase						0.0 Dollar
	Ξ 🗌 🗮	C40757-00		11	1.0		Purchase						0.0 Dollar
٧	/ersior	l		5			[Date:		12-De	ec-2016		
S	tatus			Temp	late							55	

Table Packaging Info

EBOM	EBOM Common	ME	SOM Plant Specif Ro	outing W	here Used	d Markups					
- Re	eports 🗸 🖉 🛓	Ľ	🕻 🐔 🔟 Markup 🗸 🛛	•) A	Chan	ge 🗸 🏄 👻	7- -	🗸 🖧 · 🗍 -	• ••	1• 🔜 🖉 🏹 🔮 »	
Name			Description	DesignPu	rchase F	Packaging Details	Dimension	Net Weight UoM	Weight	Part Weight Gross / (grams)	
	453050		BRAKE DUAL CCT 2.5MM	1 Design				KG	0.036		0.0
± 🗌 🗮	52823-09	1.0	HOUSING - BRAKE(2.5M.	Design					0.0		0.0
	63551-01	1.0	TERMINALA	Purchase					0.0		0.0
	C40757-00	1.0	MAIN SPRING	Purchase					0.0		0.0

Table Costs Info

	EBOM EBOM Common	MBC	OM Plant Specif Routing	Where Used	Markups			
	- Reports - 🥒 📩] 📫	📜 國 Markup 🗸 🍠 🖗	💧 📊 Chang	e 🗸 🏄 👻 🐳 🗸 🚝	📑 🕷 🕵 • 📑 • 📑	🗉 - 🔲 🖉 🌄 🖉	
	Name	Rev	Description	Net Weigh	t UoM	Net Weight	Gross Weight	
-	453050	00	BRAKE DUAL CCT 2.5MM	KG		0.036	(^
		00	HOUSING - BRAKE(2.5MM SW	PT)		0.0	(
	e 🗋 💀 63551-01	00	TERMINALA			0.0	(
	🖃 🗔 🔜 C40757-00	00	MAIN SPRING			0.0	(

Table CMS Info

EBOM EBOM Common	MBO	OM Plant Specif	Routing	Where Used	Markups				
🗮 - Reports - 🖉	<u>*</u>	📜 🔟 Markup	- 9 🕅	🚹 Change 🗸	* • • =	, , ,	a- 📑 - 📑 - 🗄	I- 💷 🖉 🏹 🚱	»
Name	Rev	Description		Net Weight Uo	M	Net Weight		Gross Weight	
- - 4 53050	00	BRAKE DUAL CCT	2.5MM	KG			0.036		(^
🛨 🗔 👪 52823-09	00	HOUSING - BRAKE	(2.5MM SW PT)				0.0		C
63551-01	00	TERMINAL A					0.0		c
🖃 🗔 🔜 C40757-00	00	MAIN SPRING					0.0		C

Table Techs Info

	EBOM	EBOM Common	MBC	OM Plant Specif	Routing	Where Used	Markups				
-	- Re	eports 🗸 🖉 🛓	」	🔁 🛐 Markup -	- 🤊 🕅	🚹 Change 🗸	* • • =	, .	0 - 0 - 0 - 0	I- 🔜 🖉 🏹 📢	3 »
	Name		Rev	Description		Net Weight Uo	M	Net Weight		Gross Weight	
		453050	00	BRAKE DUAL CCT 2	2.5MM	KG		-	0.036		(^
	± 🗆 🗮	52823-09	00	HOUSING - BRAKE	(2.5MM SW PT)				0.0		C
		63551-01	00	TERMINAL A					0.0		C
		C40757-00	00	MAIN SPRING					0.0		(

Table All Info

	EBOM EBOM Common	MBC	OM Plant Specif Routing	Where L	lsed Markups					
=	- Reports - 🥒 📩] 📫	📜 國 Markup 🗸 🥑	A 📊 Ci	nange 🗸 🏄 👻 🐇 👻		🖡 🏯 🎝 • 🗍 •	-	🗗 🔜 🖉 🏹 🔮 »	
	Name	Rev	Description	Net W	eight UoM	Ne	et Weight		Gross Weight	
-	453050	00	BRAKE DUAL CCT 2.5MM	KG				0.036		۲.
	± 🔄 🔜 52823-09	00	HOUSING - BRAKE(2.5MM SV	/ PT)				0.0		C
	63551-01	00	TERMINAL A					0.0		C
	🗆 🗖 🔜 C40757-00	00	MAIN SPRING					0.0		(

Version	5	Date:	12-Dec-2016	
Status	Template			56

Toolbar icons:

The icons contained in the part details toolbar depends on user permission and part state:





👼 💑 '

Edit: allows users to create and update EBOM

Download documents: allows users to download a selection of documents related to parts contained in EBOM

Promote and Demote: allows users to promote or demote part state

Expand: allows users to expand all levels of the EBOM or selecting the number of levels

The Action menu contains the commands used to create and update the EBOM

	EBOM EBOM Common
(🗐 Reports 🗸 🛛 🗶 🛓
	Create Parts
	Add Existing
	Add Existing Pkg
	Add Electronic Components
	Import EBOM
	Ecopy From
	🖳 Сору То
	📲 Resequence
	🚰 Change Position
	Preplace with Existing
	P Remove

- Create Parts: allows users to create new Sketch or EC parts; new parts are added to EBOM
- Add Existing: allows users to search for existing parts; selected parts are added to EBOM
- Add Existing Pkg: allows users to search for existing Packaging Components; selected parts are added to EBOM. The function should be used with parts classified as Packaging.

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Status	Template			57

- Add Electronic Components: allows users to search for existing Electronic Components; selected parts are added to EBOM. The function should be used with parts classified as PCB.
- Import EBOM: function to import an EBOM from an Excel file correctly configured
- Copy From: allows users to copy an existing EBOM (or a portion) to current part, only if EBOM is empty
- Copy To: allows users to copy EBOM (or a portion) to another part number with empty BOM
- Resequence: update Find Number field for all components contained in CBOM
- Change Position: swap find numbers for two components
- Replace with Existing: replace a component with an existing component
- Remove: remove a component from a CBOM (component is removed only from CBOM, still exists in PLM)

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Status	Template			58

Create Part

It's not necessary select a part in EBOM: parts are always created as sub-components of top part.

User has to select command Create Parts from menu Action; a new window is open

0000000105 Creat	e Part		
🚱 🔆 -			
	Fields In red Italics are required		
Туре	Part	Policy	Sketch Part
AutoName Series	Part Number 🗸	Number of Parts	1
			\frown
			Done Cancel

User has to enter:

- part type (optional): currently the only type used is Part (default); about Material Parts, Electronic Components and Packaging Components creation, dedicated commands are provided
- Policy: select Sketch Part for parts to be used in Concept BOM or EC Part for parts to be used in Engineering BOM
- AutoName Series: rule used for naming convention; always use Part Number
- Number of Parts: number of parts to create (default 1)

After parts creation, EBOM is updated; user can use other function to complete part and EBOM information

EBOM EBOM Common	ME	BOM P	lant S	pecif Where Us	sed Markups			
🚍 - Reports - 🖉 🚵 🚅 🃜 🔽 🚳 🚳 Markup - 🥑 🖓 航 Change - 🗔 😹 🍇 - 🔔 -								
Name		ß	Ë	Туре	State	Rev	F/N	Qty
000000105				EC Part	Preliminary	01	•	
O00007381 O				Sketch Part	Create	Α		

Version	5	Date:	12-Dec-2016	
Status	Template			59

Add Existing

User has to select the part to update

000000105 01	EBOM	MBOM Plant					
Bill Of Materials		🚍 - Reports - 🕺 🛃					
Change Management	Mass Upd	ate v	~				
Specs & Documents							
Related Parts	Name		4	Ē.			
Collaboration	E 🗹 🎼	000000105					
Manufacturing Details		000007381					
Vendor Part Numbers		000007392					
CMS Information							

User has to select command Add Existing from menu Action; a new window is open

Search Dufinement		Search Results 1 - 50 of approx. 16378 Results Page Size: 50 • (Max Value: 1000) • • • • • • • • • • • • • • • • • •									
	C	F	्र- 💁-	📮 - 🕻	•	\````	≈-				
Spare Part No	^	Nan	ne 🔺		Policy	Rev	Туре	Description		State	
Standard Part			00-9496-517.8	49	EC Part	00	Vendor			Publish	^
State: Preliminary Review Approved Publish Complete			00-9496-517.8	50	EC Part	00	Vendor			Publish	
Peer Review Create	4		000000001		Sketch	А	Part	EPB LH		Compl	
 Taxonomies 	î		000000002		EC Part	02	Part	EPB RH		Publish	
▼ Types			000000002		Sketch	А	Part	EPB RH		Compl	
e- ✓ Part(16378)			000000002		EC Part	01	Part	EPB RH		Publish	
 ■ □ Vendor Part Number(7 ■ □ Hardware Part(1121) 			000000003		EC Part	01	Part	Roof Switch		Approved	
■ Libraries			000000003		Sketch	А	Part	Roof Switch		Compl	
🐵 🗖 Technical Classification(000000003		EC Part	02	Part	Roof Switch		Publish	
✓ Attributes			000000003		EC Part	00	Part	Roof Switch		Approved	
Attributes			000000004		Sketch	A	Part	Housing		Compl	
Name			000000004		EC Part	00	Part	Housing		Publish	
Originated			000000005		Sketch	A	Part	Toggle		Compl	
Modified		<	000000005	>	FC Part K	00	Port	Toggle	\sim	Publich	~
< >									Done	Cancel	

User has to select parts to add and select command Done. User can filter query results using the field Search Refinement (i.e. enter a portion of part number or a description), using the Libraries, using Attributes.

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Status	Template			60

In order to search for only last revision objects, in section Attributes search for field Revision and select checkbox Highest

· · · · · · · · · · · · · · · · · · ·	000000220	Sk
Policy	□ 😓 000000320	Sk
Production Make Buy Code		
Related Physical Title	Highest	′ × k
Revision	By State	EC
Spare Part		ik
State	000007200	Sk
T (0.)		_

User has to select command Save in order to apply the changes; user can use other function to complete EBOM information

000000105 01	EBOM EBOM Common	М	BOM F	Plant S	Specif Where U	sed Markups					
Bill Of Materials	🚍 - Reports - 🛛 🗶 🛓	📃 • Reports - 🛛 🗶 🚵 🚅 江 🔽 📵 國 Markup - 👩 🛤 📊 Change - 🗔 📇 📇 - 🔍 • 🔆 -							_		
Change Management	Mass Update	lass Update							Save Reset		
Specs & Documents		_	-	_	1	1					
Related Parts	Name	4		:	Туре	State	Rev	F/N	Qty	ion	DesignPurchase
Collaboration	■ ▼ → 000000105				EC Part	Preliminary	01				Design
Manufacturing Details	🖃 🛄 👪 000007381				Sketch Part	Create	А	*	,		Design
Vendor Part Numbers	e 🗌 👪 000007392				Sketch Part	Create	Α	r	٣		Design
CMS Information	🗄 🗌 📑 🔿 000000111				EC Part	Publish	00	1	1.0		Design
Tool Parts											

Version	5	Date:	12-Dec-2016	
Status	Template			61

Add Existing Pkg

Similar to command Add Existing; the query result contains only part of type Packaging Part

Search Refinement	Search Results	1 - 50 of approx. 44	0 Result	ts Page Size: 50	• (Max Value: 1000)	(1) 1 2
	2 E Q- 🔹			*-		
Spare Part: No Policy: EC Part Sketch Part	∧ Name ⊾	Policy	Rev	Туре	Description	State
Standard Part	🗌 🥔 71119	EC Par	t 00	Packaging Part	PLASTIC BAG 305MMX3	Ρι ^
State: Preliminary Review Approved Publish Complete	2 2 71180	EC Par	t 00	Packaging Part	CARTON BOX	Рι
Peer Review Create	Y 🗌 🥔 71181	EC Par	t 00	Packaging Part	CARTON BOX 270X270X	Pι
 Taxonomies 	ˆ □ ⊘ 71182	EC Par	t 00	Packaging Part	OUTER CARTON-74 X 5	Ρι
▼ Tupes	🗌 🥔 71189	EC Par	t 00	Packaging Part	CARTON BOX 387X233X	Ρι
	0 71261	EC Par	t 00	Packaging Part	BLISTER TRAYS 18 CAVI	Рι
⊟ Hardware Part(440) □ Packaging Part(440)	🖸 🥔 71262	EC Par	t 00	Packaging Part	CARTON PARTITION 39	Ρι
* Libba	71266	EC Par	t 00	Packaging Part	BLISTER TRAY(PVC)	Ρι
	2 71713	EC Par	t 00	Packaging Part	BLISTER TRAY 270X270	Pι
	2 71962	EC Par	t 00	Packaging Part	CARTON BOX 250X180X	Ρι
 Attributes 	☐	EC Par	t 00	Packaging Part	CARTON BOX 390X285X	Pι
Name	2012	EC Par	t 00	Packaging Part	CARTON BOX 373X283X	Ρι
Originated	🗌 🥔 72012-B	EC Par	t 00	Packaging Part	CARTON BOX 400 X 300	Рι
Modified	🗌 🥔 72012-T	EC Par	t 00	Packaging Part	CARTON LID 390 X 400	Ρι
	2024	EC Par	t 00	Packaging Part	CARTON PARTITION 37	Pι
Description	72025	EC Par	t 00	Packaging Part	CARTON PARTITION 29	PL ♥
Comment	v -				Done Car	ncel

User has to select command Save in order to apply the changes; user can use other function to complete EBOM information (see chapter "Packaging Components Management")

Version	5	Date:	12-Dec-2016	
Status	Template			62

Add Electronic Components

Similar to command Add Existing; the query result contains only part of type Electrical Part

Search Refinement	Sea	rch Results 351 - 4	400	of approx. 681 R	esults	Page Size: 50	• (Max Value: 1000)	123456	7 8 9 10
	l E] 🔍 - 🕒 - 🛛 🕁	- [11 - 🗐	*				
Spare Part: No	•	lame 🔺		Policy	Rev	Туре	Description	State	
Standard Part		DLMNTLW587SRX2F	R	EC Part	00	Electrical Part	LED U1	Publish	₽ ^
State: Preliminary Review		DLMNTLW6250SX0F	R	EC Part	00	Electrical Part	OSRAM RED LED	Publish	Ð
Peer Review Create	-	DLMNTLW625SRX0F	R	EC Part	00	Electrical Part	TOPLED	Publish	e
 Taxonomies 	^ 🗆 `	DLMNTLW633SLX0F	2	EC Part	00	Electrical Part	LED	Publish	e
▼ Types		DLMNTLW633SRX0F	R	EC Part	00	Electrical Part	LED LSM 676-R1-S1-1	Publish	Ð
- 🗆 Part(681)		DLMNTLW633SRX1F	R	EC Part	00	Electrical Part	LED - LSM676	Publish	Ð
Hardware Part(681) Flectrical Part(681)	(🖸)	DLPLC205870S00R		EC Part	00	Electrical Part	LED - LYT676 S1T1-35	Publish	Ð
		DLPLC20633OS00R		EC Part	00	Electrical Part	LED - LST676 R1S1 - 1	Publish	Ð
Technical Classification(1)	•	DLPLC2W560SRX0F	२	EC Part	00	Electrical Part	LED	Publish	ē
		DLPLC2W5870SX1R	2	EC Part	00	Electrical Part	ENHANCED OPTICAL LED	Publish	Ð
 Attributes 		DLPLC2W587OSX1F	R	EC Part	00	Electrical Part	LED LYT67F	Publish	æ
Name		DLPLC2W587SRX0F	R	EC Part	00	Electrical Part	LED - LYT676 S1T1-35	Publish	Ð
Originated		DLPLC2W587SRX1F	R	EC Part	00	Electrical Part	LED LYT67F	Publish	Ð
Modified		DLPLC2W633SRX0F	२	EC Part	00	Electrical Part	LED - LST676	Publish	ē
mounicu		DLPLC2W633SRX1F	2	EC Part	00	Electrical Part	LED, RED	Preliminary	Ð
Description		B060347R0MRX0R		EC Part	00	Electrical Part	FERRITE BEAD,470E,10	Publish	• ×
Comment	× `						(Done	incel

User has to select command Save in order to apply the changes; user can use other function to complete EBOM information (see chapter "Electronic Components Management")

Version	5	Date:	12-Dec-2016	
Status	Template			63

Import EBOM

The function allows users to import EBOM information from an Excel file to either create an EBOM or update an existing one.

User has to select command Import EBOM from Action menu; a new window is open

Impo	rt BOM from	Excel	
File Brows	e No file selected	d.	
Sub	mit In Backgrou	Ind	

User has to select an Excel file composed with following fields:

	А	В	С	D	E	F	G	Н	I	J	К	L	M	N	
1	< <headings></headings>	·>													
2	<comments< td=""><td>>></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></comments<>	>>													
З	import data														
				Part				Find	Reference	Component					
4	Level	Name	Series	Family	Туре	Revision	Policy	Number	Designator	Locator	Quantity	Usage	Unit of Measure	Description	
5	0	B-20	D size	PF-05	Part	0	EC Part	4343653	rd1361	Inner wall	1	Standard	CM (centimeter)	Test Desc	
6	1	B-21	D size	PF-06	Part	1	EC Part	4343654	rd6-rd7	Inner wall	1	Standard	CM (centimeter)	Test Desc	
7	2	B-22	Asize	PF-05	Part	1	EC Part	3463345	rd1,rd2	Outer wall	1	Standard	CM (centimeter)	Test Desc	
8	2	B-25	C size	PF-00	Part	4	EC Part	560744	rd5760	Inner wall	1	Standard	CM (centimeter)	Test Desc5	
9	3	B-28	Asize	PF-03	Part	4	EC Part	275456	rd5333	Inner wall	3	Standard	CM (centimeter)	Test Desc6	
10	3	B-30	Csize	PF-01	Part	4	EC Part	43645	rd7342	Socket layer	1	Standard	CM (centimeter)	Test Desc6	
11															
14	► ► Sheet	F1 ∕SŁ	neet2 /	Sheet3	/ 🐑 /					(] ↓ [

- Level: The level of the object. To create an EBOM, exactly one part must be designated with Level 0. To update an existing EBOM, one or more parts must be designated with Level 1 but cannot include any Level 0 parts in the spreadsheet.
- Name
- Type: The type of the object, part, or subtype such as Hardware Part, Molded Part, etc.
- Revision: The revision of the object. If the revision column is empty, only the first revision in the policy sequence is considered for import.
- Policy: The policy of the object (EC Part or Development Part)
- F/N: position in EBOM
- Reference Designator: The reference designator ID is used on printed circuit boards to indicate where an electronic component is to be inserted. Reference designators are usually values like R1, R2, R7 or C1, C5. Designators can be represented as single values (example: rd1) or multiple values separated by commas or dashes (examples: rd1, rd7, rd8-rd10).

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Status	Template			64

- Component Locator: Similar to a reference designator, the component locator gives additional location information and/or can be used by industries other than electronics. For example, it can be used to indicate the location for a motor that continually fails.
- Quantity
- Usage: option are Standard, Reference, Per Sales Order, or As Required
- Unit of Measure
- Description

Version	5	Date:	12-Dec-2016
Status	Template		65

Copy From

User has to select the part to update

000007381 A	EBOM	EBOM Co	mmon	ME	BOM P	lant S	pecif
Bill Of Materials		eports -	× 🛓		2	. 🗸	
Change Management	Mass Upd	late					
Specs & Documents							
Related Parts	✓ Name			4	ß		Туре
Collaboration	₽ 🗹 📷	000007381					Sket
Manufacturing Details	\sim						
Vendor Part Numbers							

User has to select command Copy From from menu Action; a new window is open in order to search part with EBOM (same process of command Add Existing)

Search Refinement	Search Results 1 - 50 of ap	oprox. 16378 Results	B Page Size: 50 🕨 (Max Val	ue: 1000) 🌆
Q 2	🔄 🔍 - 🛋 - 🕎 - 🚺	🗉 • 🔜 🧮 💥	2-	
Policy: EC Part Sketch Part Standard Part	Name 🔺	Policy Rev Typ	pe Description	State
State: Preliminary Review	00-9496-517.849	EC Part 00 Ve	end	Publish 🔺
Approved Publish Complete Peer Review Create	00-9496-517.850	EC Part 00 Ve	end	Publish
▼ Tayonomies	000000001	Sketc A Pa	art EPB LH	Com
- Idvolionies	000000002	EC Part 02 Pa	art EPB RH	Publish
 Types Part(16378) Vendor Part Number(7 	000000002	Sketc A Pa	art EPB RH	Com
	000000002	EC Part 01 Pa	art EPB RH	Publish
	00000003	EC Part 01 Pa	art Roof Switch	Appr
 Libraries 	00000003	Sketc A Pa	art Roof Switch	Com
⊕ □ Technical Classification(○ 000000003	EC Part 02 Pa	art Roof Switch	Publish
 Attributes 	000000003	EC Part 00 Pa	art Roof Switch	Appr
Name	000000004	Sketc A Pa	art Housing	Com
Originated	000000004	EC Part 00 Pa	art Housing	Publish
onginatoa	000000005	Sketc A Pa	art Toggle	Com
Modified	000000005	EC Part 00 Pa	art Toggle	Publish
Description	000000006	Sketc A Pa	art Tip	Com
Comment	< >	<		\sim
< >				Submit

Version	5	Date:	12-Dec-2016	
Status	Template			66

A new window is opened, user has to select parts to copy in part EBOM and select command Submit

Sel	ect EBOM Parts	5									
X	»-										
	Name 🕜	Rev	Туре	Find Number	Reference Designator	Component Location	Quantity	Usage	Physical Collaboration	Description	s
	\$52581-01	00	Part	15	1	1	1.0	Standard	False	PLUG	Р
	* 52819-02	00	Part	5			1.0	Standard	False	PLUNGER - BRAKE	Р
	52820-01	00	Part	3			1.0	Standard	False	CAM - BRAKE	Р
	\$52821-01	00	Part	2			1.0	Standard	False	COUPLER - BRAKE	Р
☑	\$ 52822-04	00	Part	14			1.0	Standard	False	SLIDER	Р
	\$ 52823-09	00	Part	1			1.0	Standard	False	HOUSING - BRAKE(2.5MM SW PT)	IP
	\$ 52824-04	00	Part	4			1.0	Standard	False	SOCKET - BRAKE(2.5MM SW PT)	1 P
	🏶 63551-01	00	Part	10			1.0	Standard	False	TERMINAL A	Ρ
	63552-03	00	Part	8			1.0	Standard	False	TERMINAL B	Р
	4 63553-03	00	Part	7			1.0	Standard	False	TERMINAL C	Р
◄	4 63554-02	00	Part	9			1.0	Standard	False	TERMINAL D	Р
	4 63555-03	00	Part	6			1.0	Standard	False	CONTACT BRIDGE	Р
	63566-01	00	Part	12			1.0	Standard	False	LEAF SPRING	P
	C40757-00	00	Part	11			1.0	Standard	False	MAIN SPRING	P
<									(Submit Can	> icel

User has to select command Save in order to apply the changes; user can use other function to complete EBOM information

000007381 A	EBOM EBOM Common	M	BOM P	lant S	specif W	here Used	Mark	ups				
Bill Of Materials	🚍 - Reports - 🕺 🏄		: 1	 ✓ 		30 Markup +	5		nange 🗸 🗔	🗸 🎝 - 🗍	l- 📴- 📰- 🜉 🖊	»
Change Management	Mass Update	1									Sav	re Reset
Specs & Documents						1			1	1		
Related Parts	✓ Name	4			Туре	State	Rev	F/N	Qty	U of M	Description	DesignPurcl
Collaboration	000007381				Sketch Part	Create	Α			PCS - PIE		Design
Manufacturing Details					EC Part	Publish	00	15	1.0	PCS - PIE	PLUG	Design
Vendor Part Numbers				U				r	r	r	r	P
CMS Information	Image: The second se			0	EC Part	Publish	00	2	1.0	PCS - PIE	COUPLER - BRAKE	Design
Tool Parts					EC Part	Publish	00	14	1.0	PCS - PIE	SLIDER	Design
Referenced By				U				r	r		r	r
Classification PowerView	E B 52823-09			0	EC Part	Publish	00	1	1.0	PCS - PIE	HOUSING - BRAKE(2.5M	Design
Issues				<u>له</u> 0	EC Part	Publish	00	9	1.0	PCS - PIE	TERMINAL D	Purchase
	< >	<										>
	Filter:Info 1: Description and Make-Buy											6 objects

Version	5	Date:	12-Dec-2016	
Status	Template			67

Сору То

Starting from EBOM view, user has to select the part to be copied to part destination

000007381 A	EBOM EBOM Common	MBOM	Plant S	pecif	Whe	re Used	»			
Bill Of Materials	📃 - Reports - 🥒 🛓		1 🗸		3 D	Mark	up 🚽 🤟	øa, » [a - 3	: - >>
Change Management				_		-				
Specs & Documents	Name			lype	State	Rev	F/N	Qty	U of M	Description
Related Parts	000007381			Sket	Create	А			PCS	
Collaboration			b 0	EC	Publ	00	1	1.0	PCS	HOUSING - BRAKE
Manufacturing Details	5 2922-04			50	Dubl	00		1.0	000	
Vendor Part Numbers			0	EC	Publ	00	14	1.0	PUS	SLIDER
CMS Information	■ ▼ → 52581-01		🛱 0	EC	Publ	00	15	1.0	PCS	PLUG
Tool Parts	D D D 50004 04		筒							
Referenced By	<u> </u>		0	EC	Publ	00	2	1.0	PCS	COUPLER - BRAK
Classification PowerView	■ ☑ → 63554-02		5	EC	Publ	00	9	1.0	PCS	TERMINAL D
leenae			J							

User has to select command Copy To from menu Action; a new window is open in order to search part with EBOM (same process of command Add Existing)

Search Refinement	Search Results 1 - 8 of app	orox. 8 Results F	Page Size: 50 🔹 (Max Value: 1	1000) iee e 1
0000073* Q 3	🔄 🔍 - 🕒 - 📑 - 🖥	🛛 - 🔜 🗮	**	
Policy: EC Part Sketch Part Standard Part	Name 🔺	Policy Rev	Type Description	State
State: Preliminary Review Approved Publish Complete	000000073	Sket A	Part	Create 🖨
Peer Review Create	○ 🐱 000007300	Sket A	Elec BAS21	Create 🗗
 Taxonomies 	000007311	Sket A	Part	Create 🖨
▼ Types	000007322	Sket A	Part	Create 🖪
□· ♥ Part(16377) □· ♥ Vendor Part Number(7	000007333	Sket A	Part	Create 🖨
. Hardware Part(1121)	000007344	Sket A	Part	Create 🗗
▼ Attributes	000007355	Sket A	Part	Create 🗗
Name	000007392	Sket A	Part	Create 🖨
Originated	-			
Modified				
Description				
Comment				
Current Version				
Effectivity Date	< >>	<		Submit

Version	5	Date:	12-Dec-2016	
Status	Template			68

User has to select command Save in order to apply the changes; user can use other function to complete EBOM information

000007392 rev A: Engine	000007392 rev A: Engineering Bill of Materials							
🗮 - Reports - 🕺	🛓 📫 江 🔽 📓	30	Markup -	9	M Ch	ange - d	a »	»
Mass Update	¥							Save Reset Close
🗌 Name	Related Physical Title	2	Туре	Rev	Policy	F/N	Ref Des	Component Location
🖃 🗔 👪 000007392			Part	А	Sket			
			Part	00	EC	1	r	ŀ
			Part	00	EC	14	P	F
⊕ □ ➡ ○ 52581-01			Part	00	EC	15	r	F
🕀 🗔 👪 💿 52821-01			Part	00	EC	2	P	r (
			Part	00	EC	9	r	1
< >	<							6 objects
								o objects

Version	5	Date:	12-Dec-2016	
Status	Template			69

Resequence

This command is available only for development parts in a state before the Complete state and production parts in the Preliminary state.

User has to select icon Edit and select the command Resequence from Action menu; the EBOM is updated with new Find Numbers

	EBOM EBOM Common	
(🚍 - Peports - 🛛 🗶 🛓	
	Create Parts]
-	Add Existing	ſ
L	Add Electronic Components	l
	Import EBOM	
1	E Copy From	
	🖶 Сору То	
	♣ Resequence	
	Position	
	🍄 Replace with Existing	
	Remove	

User has to select command Save in order to apply the changes

000007392 rev A: Enginee	ering Bill of Materials									
🗮 - Reports - 🕺	🛓 📫 江 🔽 🚳	30	Markup •	· 🤊	M Ct	nange - d	# # `	🛄 - 🛛 🔂 - 📰 -	📃 🔁 🏹 »	
Mass Update	~								Save Reset Clo	ose
🗌 Name	Related Physical Title		Туре	Rev	Policy	F/N	Ref Des	Component Location	Description	Stat
000007392			Part	А	Sket	\frown				Crea
🛨 🗌 👪 🔕 52823-09			Part	00	EC	10 4	Y I	٢	HOUSING - BRAKE(2.5M	Pub
🗄 🗌 👪 🔕 52822-04			Part	00	EC .	20 44	1	r	SLIDER	Pub
🛨 🗔 👪 🔕 52581-01			Part	00	EC.	30 45	1	r	PLUG	Pub
🕀 🗔 👪 🔕 52821-01			Part	00	EC	40 <mark>2</mark>	1	r	COUPLER - BRAKE	Pub
🕀 🗔 👪 🔕 63554-02			Part	00	EC	50 <mark>9</mark>	/	r	TERMINAL D	Pub

Version	5	Date:	12-Dec-2016	
Status	Template			70

Change Position

User has to select the part to update

000007392 A	EBOM	EBOM Co	mmon	ME	BOM P	lant S	pecif V	Vhere Used	Mark	kups
Bill Of Materials		eports -	🗶 🛓		3	. 🗸		30 Markup	- 9	e a
Change Management	Mass Upd	late		1		_				
Specs & Documents							1	1		
Related Parts	Name				Ē.	*	Туре	State	Rev	F/N
Collaboration		000007392					Sketch Part	Create	А	
Manufacturing Details	•	12823-09				5	EC Part	Publish	00	1
Vendor Part Numbers		7				0				
CMS Information		52822-04				С 0	EC Part	Publish	00	14

User has to select command Change Position from menu Action; a new window is open with EBOM content

Select BOM Part to Change Position With									
📮 · 📰 · 💭 🏹 🔮 🧱 🔆 ·									
Name 🔺	Related Physical Title	•	Туре	Rev	Policy	F/N	Ref [
52581-01			Part	00	EC	15			
52821-01			Part	00	EC	2			
52822-04			Part	00	EC	14			
<u> 63554-02 63554-02 </u> 6			Part	00	EC	9			
v									
< >	<			1			>		
	4 objects, 1 selected				Submi	Can	cel		

User has to select parts in order to swap the position and select command Submit. User has to select command Save in order to apply the changes

000007392 rev A: Enginee	ering Bill of Materials									
🗮 - Reports - 🗶	🛓 📫 江 🔽 🛃	I	Markup -	•	M Ct	nange - d		🛄 - 🛛 🖬 -	💭 🔁 🔽 »	
Mass Update	¥								Save Reset Clo	ose
Name	Related Physical Title	•	Туре	Rev	Policy	F/N	Ref Des	Component Location	Description	Stat
000007392			Part	А	Sket	\frown				Crea
🕀 🗔 📷 🙆 52823-09			Part	00	EC	10 4	(r	HOUSING - BRAKE(2.5M	Pub
🕀 🗌 🔜 🙆 52822-04			Part	00	EC .	20 44	1	r	SLIDER	Pub
🕀 🗔 👪 🙆 52581-01			Part	00	EC .	30 45	1	*	PLUG	Pub
🕀 🗔 👪 🔕 52821-01			Part	00	EC	402	1	r	COUPLER - BRAKE	Pub
🕀 🗔 👪 🔕 63554-02			Part	00	EC	50 😡	/	*	TERMINAL D	Pub

Version	5	Date:	12-Dec-2016	
Status	Template			71

Replace with Existing

The function replaces a selected part with another existing part, only if part is in an editable state and has no children (is not an assembly).

000007392 A	EBOM	EBOM Co	mmon	ME	BOM P	lant S	pecif V	Vhere Used	Mark	kups
Bill Of Materials	- R	eports -	🗶 🛓		2			30 Markup	- 9	(A)
Change Management	Mass Upd	Jate		1						,
Specs & Documents								1		
Related Parts	Name				ß	:	Туре	State	Rev	F/N
Collaboration		000007392					Sketch Part	Create	А	
Manufacturing Details	•	12823-09				5	EC Part	Publish	00	1
Vendor Part Numbers		/				0				
CMS Information		52822-04				🖾 0	EC Part	Publish	00	14

User has to select the part to update

User has to select command Replace With Existing from menu Action; a new window is open in order to search part with EBOM (same process of command Add Existing)

Search Refinement	Search Results 1 - 50	of a	pprox. 163	76 Res	sults Pag	ge Size: 50) (Max Val	ue: 1000)	10
08	E 🔍 - 🛋 - 🗖	- [*\$-				
Policy: EC Part Sketch Part Standard Part	Name 🔺		Policy	Rev	Туре	Description		State	
State: Preliminary Review	00-9496-517.849		EC Part	00	Vend			Publish	^
Approved Publish Complete Peer Review Create	00-9496-517.850		EC Part	00	Vend			Publish	
▼ Taxonomies	000000001		Sketc	А	Part	EPB LH		Com	
	000000002		EC Part	02	Part	EPB RH		Publish	
▼ Types	000000002		Sketc	А	Part	EPB RH		Com	
Vendor Part Number(7	000000002		EC Part	01	Part	EPB RH		Publish	
	000000003		EC Part	01	Part	Roof Switch		Appr	
▼ Libraries	000000003		Sketc	Α	Part	Roof Switch		Com	
■ □ Technical Classification(000000003		EC Part	02	Part	Roof Switch		Publish	
 Attributes 	000000003		EC Part	00	Part	Roof Switch		Appr	
Name	000000004		Sketc	А	Part	Housing		Com	
Originated	000000004		EC Part	00	Part	Housing		Publish	
	000000005		Sketc	А	Part	Toggle		Com	
Modified	000000005		EC Part	00	Part	Toggle		Publish	
Description	000000006		Sketc	А	Part	Тір		Com	
Comment	<	>	<				\square	>	Ť
< >							Done	Cancel	

Version	5	Date:	12-Dec-2016	
Status	Template			72
User has to select the option related to EBOM replace and select command Done

Replace with Existin	g
*.	
Fleids in red Italics are required.	
Part	52823-09
Replace With	00000003,
Action	Replace With No BOM OReplace With BOM of Existing Part
	Done Cancel

Both the options "Action" replace the original part (in this example "52823-09") with the final part (in this example "0000000003"). The difference is related to final part EBOM:

- The option "Replace with BOM of Existing Part" copy the EBOM from original part to final part
- The option "Replace with No BOM" doesn't update the final part EBOM

Final version of EBOM with option "Replace with No BOM"

000007392 A	EBOM EBOM Common	MB	OM P	lant S	pecif	Wher	re Used	Ma	rkups		
Bill Of Materials	🚍 - Reports - 🕺 🛓		: 1			30	Mark	up 🗸 🔤		s and a second s	»
Change Management	Mass Update	1								_	Save Reset
Specs & Documents											
Related Parts	Name	4	Ľ۵	:	Туре	State	Rev	F/N	Qty	U of M	Description
Collaboration	□ □ ➡ 000007392				Sket	Create	Α			PCS	
Manufacturing Details	0 🗔 📑 🗢 52823-09			8	EC-	Publ	00	4	1.0	PCS	HOUSING - BRAKE(2.5
Vendor Part Numbers				¥				r	r	r	r
CMS Information	□ □ ➡ ○ 000000003		é		EC	Publ	02	1	1.0	PCS	Roof Switch
Tool Parts	D D				EC	Publ	00	60	1.0	PCS	Roof Switch RH
Referenced By	E 🗌 🔀 52822-04			: 0	EC	Publ	00	14	1.0	PCS	SLIDER

Version	5	Date:	12-Dec-2016	
Status	Template			73

Final version of EBOM with option "Replace with BOM of Existing Part"

000007392 A	EBOM EBOM Common	M	BOM P	lant S	pecif	Whe	re Useo	d Ma	arkups		
Bill Of Materials	🚍 - Reports - 🛛 🗶 🛓		: 1	-		3	Mark	up 🗸 📔	9	∎∎ »	»
Change Management	Mass Update	1					·			_	Save Reset
Specs & Documents	· · ·	11			1	1	1	1		1	
Related Parts	Name	4	圙	Ë	Туре	State	Rev	F/N	Qty	U of M	Description
Collaboration	□ □ □ 000007392				Sket	Create	Α			PCS	^
Manufacturing Details	⊞ 🔲 🚟 🖨 52823-09			5	EC-	Publ	00	4	1.0	PCS	HOUSING - BRAKE(2.5
Vendor Part Numbers				¥				P	r	r	r
CMS Information	□ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □		é		EC	Publ	02	1	1.0	PCS	Roof Switch
Tool Parts	Image: Constraint of the second se				EC	Publ	00	60	1.0	PCS	Roof Switch RH
Referenced By	🛨 🗌 🔜 🔿 096126				Man	Publ	00	3	0.02	KG	MASTERBATCH BLACK
Classification PowerView	E 🔲 🔀 52822-04			ё 0	EC	Publ	00	14	1.0	PCS	SLIDER
Issues	□ □ 🔜 52581-01				FC	Publ	00	15	10	PCS	PLUG

User has to select command Save in order to apply the changes. In case of final part updated (in this example, EBOM related to part "0000000003" is updated because is merged with EBOM of part "52823-09"), the system checks if user has the permission (in this example, the user is updating an EBOM already released).

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Remove

User has to select the parts to remove from EBOM

000000105 01	EBOM	EBOM Common	ME	BOM F	Plant S	Specif Where U	lsed Markuj	ps	
Bill Of Materials		eports 🗸 🛛 🗶 🛓			 ✓ 	🔞 🛐 Markup	- 3 🗛 🛙	Cha	nge -
Change Management	Mass Upd	ate	1						
Specs & Documents									
Related Parts	Name		4	é	:	Туре	State	Rev	/ F/
Collaboration	5	000000105				EC Part	Preliminary	01	
Manufacturing Details		000007381				Sketch Part	Create	A	P
Vendor Part Numbers		000007392				Sketch Part	Create	А	r
CMS Information	± 🗆 🗄	a 00 <u>00000111</u>				EC Part	Publish	00	1
Tool Parts		DLPLC205870S00				EC Part	Publish	00	2
Referenced By		DLPLC2W560SRXI)			EC Part	Publish	00	3
Classification PowerView									
leeuee									

User has to select command Remove from Action menu; the user has to confirm the change

You have chosen to remove the selected items from the list. Removing an item from the list does not d continue with the removal, click OK. To cancel the removal, click Cancel.	elete the item from the database. To
	OK Cancel

User has to select command Save in order to apply the changes; user can use other function to complete EBOM information

000000105 01	EBOM EBOM Common	м	BOM	Plant	Specif Where U	lsed Markups						
Bill Of Materials	🚍 - Reports - 🛛 🗶 🛃	L	* *	1 🔽	🗿 🛐 Markup		Chang	e- 🗔 🐰 🎩	- 🔔 - 🖪 - 🗊	- 📃 🖉 🏹	🚱 🗐 🔆 -	~
Change Management	Mass Update	1										Save Reset
Specs & Documents			_	_					1		1	
Related Parts	Name	4			Туре	State	Rev	F/N	Qty	U of M	Description	DesignPurchase
Collaboration	□ □ ➡ 000000105				EC Part	Preliminary	01			PCS - PIECES	Housing	Design
Manufacturing Details	- 🗖 🔚 000007381				Sketch Part	Create	А	,	1.0	PCS - PIECES	*	Design
Vendor Part Numbers	e 🗌 🔜 000007392				Sketch Part	Create	Α	,	1.0	PCS - PIECES	٢	Design
CMS Information	🛨 🗔 🌄 0000000111				EC Part	Publish	00	1	1.0	PCS - PIECES	Housing	Design
Tool Parts					EC Part	Publish	00	2	1.0	PCS-PIECES	LED - LYT676-S1T1-35	Purchase
Referenced By					EC Part	Publish	00	3	1.0	PCS-PIECES	LED	Purchase
Classification PowerView												
Issues												

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Status	Template		75	

EBOM Common

The tab shows the EBOM with Substitute and Alternate parts, if defined by Engineering.

453050 00	EBOM EBOM Common	MBOM Pla	ant Sp	ecif	Routing	Where	Used I	Aarkups								
Bill Of Materials	Actions - Reports -	Markup +	2		. 🎝 - 🔒	-	-] 👌	7	2 📰	⅔-					
Change Management	вом		BOM A	ttributes		4										
Specs & Documents	Name		1	Rev I	Mfg Part Use	End Item	Replaces	Туре	Policy	F/N	Ref Des	Comp Location	Description	State	Qty	UO
Related Parts	= 🗆 🔜 453050	-		00		Yes		Part	FC				BRAKE DUAL CCT 2 5MM	Publ		10
Collaboration				00	Deiman	Vee		Deat	50	4				Dubl	4.0	
Manufacturing Details	± ± g 32623-09			00 1	Primary	res		Pan	EC	1			HOUSING - BRAKE(2.5M	Publ	1.0	
Vendor Part Numbers	E 52821-01		=	00 1	Primary	Yes		Part	EC	2			COUPLER - BRAKE	Publ	1.0	1
CMS Information	E 🖸 👪 52820-01		#	00 1	Primary	Yes		Part	EC	3			CAM - BRAKE	Publ	1.0	1
Tool Parts	1 52824-04		=	00 1	Primary	Yes		Part	EC	4			SOCKET - BRAKE(2.5M	Publ	1.0	1
Referenced By	E 🔄 📑 52819-02		#	00 1	Primary	Yes		Part	EC	5			PLUNGER - BRAKE	Publ	1.0	1
Classification PowerView	e 🗌 📷 63555-03		#	00 1	Primary	Yes		Part	EC	6			CONTACT BRIDGE	Publ	1.0	1
Issues	63553-03		#	00 1	Primary	Yes		Part	EC	7			TERMINAL C	Publ	1.0	1
	e 🗌 📷 63552-03		#	00 1	Primary	Yes		Part	EC	8			TERMINAL B	Publ	1.0	1
	63554-02		#	00 1	Primary	Yes		Part	EC	9			TERMINAL D	Publ	1.0	1
	63551-01		=	00 1	Primary	Yes		Part	EC	10			TERMINAL A	Publ	1.0	1
	🖃 🔲 👪 C40757-00		#	00 1	Primary	Yes		Part	EC	11			MAIN SPRING	Publ	1.0	1
	e 🗌 🖬 63566-01		=	00 1	Primary	Yes		Part	EC	12			LEAF SPRING	Publ	1.0	۰.
	< >	<														>
	Malta														16 0	bjects

The menu Actions contains the commands to substitute a part with an alternate or substitute



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Status	Template		-	76

MBOM Plant Specific

The tab shows the Manufacturing Bill Of Material (MBOM).

453050 00	EBOM EBOM Common	M	BOM Pla	nt Specif Routing	Where Used	Markups						
Bill Of Materials	Reports - 🖉 🍙 🗔	.		- 🖪 - 📰 - 🔜 🛛	7 😪 🗐	**						
Change Management	мвом		Basics					BOM At	tributes			
Specs & Documents	Name	4	Туре	Description	Base Materials	Plating Materials	Painting Materials	F/N	Qty	Quantity Multiplier	U of M	
Related Parts	453050		EC	PRAKE DUAL COT 2 5MM		-					PCS	^
Collaboration			E0	BRAKE DOAL COT 2.5MM					4.0	4.00	P03	
Manufacturing Details	± 🔄 📷 52823-09		EC	HOUSING - BRAKE(2.5M				1	1.0	1.00	PCS	1
Vendor Part Numbers	🛨 🔲 🚟 52821-01		EC	COUPLER - BRAKE				2	1.0	1.00	PCS	1
CMS Information	🛨 🔲 🌉 52820-01		EC	CAM - BRAKE				3	1.0	1.00	PCS	1
Tool Parts			EC	SOCKET - BRAKE(2.5M				4	1.0	1.00	PCS	1
Referenced By	🛨 🗔 🌆 52819-02		EC	PLUNGER - BRAKE				5	1.0	1.00	PCS	1
Classification PowerView	🛨 🔲 🅁 63555-03		EC	CONTACT BRIDGE				6	1.0	1.00	PCS	1
Issues	🛨 🗔 🏣 63553-03		EC	TERMINAL C				7	1.0	1.00	PCS	1
	🛨 🔲 🌉 63552-03		EC	TERMINAL B				8	1.0	1.00	PCS	1
			EC	TERMINAL D				9	1.0	1.00	PCS	1
	🛨 🗔 🌉 63551-01		EC	TERMINALA				10	1.0	1.00	PCS	1
	🛨 🔲 👪 C40757-00		EC	MAIN SPRING				11	1.0	1.00	PCS	1
	+ 🗌 🏣 63566-01		EC	LEAF SPRING				12	1.0	1.00	PCS	/~
	< >> Malta(GMT+01:00) Amsterdam. Berlin	K Bern	, Rome, St	odkholm, Vienna							16 (> objects

Users can navigate MBOM, in order to see specific MBOM information (Stock Location, BFLUSH, etc.)

Users without a MBOM Engineer role have only a read access.

Version	5	Date:	12-Dec-2016	
Status	Template			77

Routing

The tab shows the process to produce the part (Routing).

453050 00	EBOM EBOM Common	MBOM Plant Specif	Routing When	e Used Marku)S				
Bill Of Materials	Plant Malta 🗸 🤌 🔍 -	🖪 - 📰 - 🔜 🖉 🏹	7 🔳 🔆 -						
Change Management		+ ,							-
Specs & Documents	Name	Description	F/N 🔺		Department	Resource	Schedule Run Standard	Operation Efficiency	P
Related Parts	TST	Testing	99	4	DFTAS ASSEM	P064	1489	100	N
Collaboration									

Process details

: Properties						
🚱 🔆 -						
Operation	TST	Testing				^
F/N	99					
Process ID						
Department	DFTAS ASSEMBLY					
Resource	P064					
Set-up Standard	0	Crew Size (Setup)	0			
Schedule Run Standard	1489	# of Machines (setup)	1			
Cost Run Standard	1489.0	# of Men/Machine	1	# of Machines	1	
Lag Time (Hrs)	0.0					
Standard Type	A	Expected Receipt Crt by Transfer Batch	2			
Multiple Parts (Part Multiplier)	0	Reporting Point	Y			
						Ť

Users without a MBOM Engineer role have only a read access.

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Status	Template			78

Markups

The tab shows the markups related to current part.

000000632 00	EBOM EBOM Common	MBOM Pla	ant Specif Routing	Where Used	Markups			
Bill Of Materials	Markup Actions 🗸 🛄 -	E	I- 📃 🖉 🏹 😪 🕻	1 🔆 -				
Change Management				2 - 4				
onange management	Namo	Type	Description	Statue	Created	Originator	Ownor	Change Action
Specs & Documents		Type	Description	310103	Created	originator	Owner	Change Action
Related Parts	BMK-0000118	BOM Mar	Replace index	Applied	2/22/2016 10:18:12 PM	matthew	matthew	CA-0018084
Collaboration								

Markups are used during a Change Request process, in order to "mark" the requested modification in EBOM, before approval.

In order to see the Markup content, select checkbox related to Markup and select command Open from menu Actions

			Markup Actions 🗸 🗔 📬 🗸
	,	-	🖉 Open
000000632 00	EBOM EBOM Common	MBOM Pla	× Delete
Bill Of Materials	Markup Actions 🗸 🦳	- 💷 - 💷	Kerge
Change Management			Approve
Space & Documents	✓ Name ▲	Туре	🖄 Reject
Specs & Documents		DOM Mar	🗟 Change Owner
Related Parts	▼ BMK-0000118	BOM Mar	Apply
Collaboration			

Table shows the requested changes (table content depends on Markup state: if not approved, the user can update markup information using commands contained in the toolbar, if approved the toolbar is empty)

Bill of Materials	Bill of Materials								
* 🤊 🖁 🎭 🛄	🛃 · 📰 - 🔜 👫 🖉	7 🔳	*≁						
Mass Update	~							Reset	Close
Name	Related Physical Title	•	Туре	Conflict Queue	Rev	Policy	F/N	Ref Des	Compor
000000632			Part		00	EC	٣	٣	٢
O00000017 O			Part		00	EC	1	r	r
⊞ 🔲 🎆 🖨 000000022			Part	-	01	EC	2		
e 🗆 📑 000000097			Part		00	EC	3	r	r
🖃 🗔 🔜 0000000100			Part		00	EC	4	r	,
⊕ □ ➡ ○ 000000487			Part		00	EC	2	, ,	·

Version	5	Date:	12-Dec-2016	
Status	Template			79

Change Management

Page shows information related to Change processes related to current part.

The tab Change Order contains all CO objects, used to release the part.

Crop Images here ■ Part (01) 1:	BRAKE DUAL CCT SWITCH SI	ate : Preliminary wner : matthew.spite odified : Mar 23, 201	→ Review eri 6 10:43:09 Al	Drop files here				< <u>+</u> <	> 2 *
453052 01 ^	Change Order Change R	lequest							
Bill Of Materials	* * = -	- III -	5	7 💁 🛛	≣ ‰-				
Change Management		Change Action Inf	ormation and	Assignment					
Specs & Documents	Name	Change Action	Status	State	Assignee	Start Date	Planned End	Requested Change	Change Commen
Related Parts	CO-0025013	CA-0024538		Pending	Matthe	Mar 23, 2016	Mar 25, 2016	For Release	
Collaboration			*	1 onding	mattro	indi 20, 2010	mar 20, 2010	1 of Ptologoo	
Manufacturing Details									
Vendor Part Numbers									
anal c is									

The Change Order is created for the initial revision by MBOM Engineer, in order to define the plant where part will be used and for each Change Request process, in order to release the new revision.

	0		•								
	Drop Images here Part (01)		BRAKE DUAL CCT SWITCH Sta Ow Mo	te : Preliminary vner : matthew.spite dified : Mar 23, 2010	→ Review eri 6 10:43:09 AM	Drop files here				く合	<> 2
	453052 01	•	Change Order Change Re	equest							
	Bill Of Materials		+ ★ = □ □.	•• · · ·	2	7 😪 🛛	≣ ⅔-				
	Change Management			Change Action Info	ormation and	Assignment					
	Specs & Documents		Name	Change Action	Status	State	Assignee	Start Date	Planned End	Requested Change	Change Comments
	Related Parts	Ľ	CR-0000165	CA-0024538	÷	Pending	Matthe	Mar 23	Mar 25, 2	For Release	
	Collaboration					2					
	Manufacturing Details										
1	Vendor Part Numbers										
	CMS Information										

The tab Change Request contains all CR objects, used to change the part.

The Change Request is created by users in order to ask for a new part revision; when the CR is approved, the system creates automatically a new CO object, used to release the new part revision.

When a part is affected by an active Change Request (means, the change process is not completed), the part header contains an alert



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Also the EBOM table contains a dedicated column to show the parts affected by active Change Requests

Drop Images here Part (01)	BRAKE DUAL CCT SWITCH	State : Preliminary → Review Drop files Owner : matthew.spiteri Modified : Mar 23, 2016 10:43:09 AM Drop files
453052 01	EBOM EBOM Comm	non MBOM Plant Specif Routing Whe
Bill Of Materials	📃 - Reports - 🥖	🕈 🛓 📫 🏞 🔽 🚱 國 🛛 Markup 🗸 👩
Change Management		
Specs & Documents		A 🗎 🖻 Type 3
Related Parts	□ □ □ 452052	00A (M.Flow
Collaboration	E E E E 455052	04E (MEM A
Manufacturing Details		la l
Vendor Part Numbers	± 🔲 🏥 52826-09	09N (MEM EC Part F

About Change Request creation and management, see document "Engineering Change Training".

Version	5	Date:	12-Dec-2016	
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Specs and Documents

Page shows the CAD Drawings and Documents related to current part

453050 BRAKE DUAL C ♣ Part (00)	CCT 2.5MM State : Publish Owner : Corporate Modified : Feb 29, 2016	4:00:20 PM								<
453050 00	Specifications Reference	e Documer	1							
Bill Of Materials	* 📥 🗔 🛄 - 🗔	• = =	2	79	圖》	È-				
Change Management	Name .		A	Title	Rev	Ver	Type	Actions	Description	Docur
Specs & Documents		-	A.	THU O			.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		boothpaton	Dood
Related Parts	🗌 🛱 453050-A	0/1		4530	03J	1	CAD	2	MEM Assembly Drawing	
Collaboration	🗌 🛗 M-453050	0/1		M-45	00A	1	CAD	2	M.Flow Chart-A	
Manufacturing Details	🗌 🛱 P-453050	0/1		P-45	00G	1	CAD	2	P-Layout - A	
Vendor Part Numbers										
CMS Information										
		1								

Specifications

The menu Actions contains the function to create and update drawings (see chapter "CAD Drawing management")

Specifications	Referenc		
≡• * ⊒	- -		
* Create New			
Add Existing		-	
📩 Download			
Checkout			
🕮 Remove			

Reference Documents

The menu Actions contains the function to create and update documents (see chapter "Document related to part")

Specifications	ce Doci	umen	
=• 📮 斗•	-		
* Document			-@
Add Existing			
📥 Download			
🗟 Checkout			
- Remove			
* ECAD: Create			

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Related Parts

Page shows information about a part list of alternate parts, substitute parts and parts created by copy.

000000105 01	Alternate Parts Substitute P	Parts		
Bill Of Materials	* M P	🐻 - 🗊 - 🔜 🖉	₹ 🕄 🔝 🖓 -	
Change Management				Description
Specs & Documents		lev Type	Policy	Description
Related Parts	02	2 Part	EC Part	EPB RH
Collaboration				
Manufacturing Details				
Vendor Part Numbers				
CMS Information				
Tool Parts				
Referenced By				
Classification PowerView	< > <			
Issues				
	Derived From Derived To			
	Change - 📑 🗸 🎝	- 📴 - 📰 -	II 🖉 🖓 😫 🛒 💸-	
	Source Name 🔺 🛛 D	erived Name Derived	Description Derived Part State	Derived Part Desig

Alternate parts and Substitute parts can be used by MBOM Engineer in order to update MBOM Plant Specific.

The toolbars contain commands to define the related parts; these commands are available only if part state is Preliminary.

An alternate part is a component that is a suitable replacement for another part in every assembly in which the original part occurs.

Alternate Parts Substitute Parts Image: Imag							
🗌 Name 🔺	Rev	Туре	Policy	Description			
□ ■ 000000002	02	Part	EC Part	EPB RH			

Version	5	Date:	12-Dec-2016	
Status	Template			83

A substitute part is a component that is a suitable replacement for another part in only one assembly in which the original part occurs.

Alternate Parts Substitute Parts										
💽 🔊 🖉 🚚 🛄 - 🗒 - 🎫 💭 🏹 😪 🇮 🔆 -										
Substitute Parts	Rev	Туре	Policy	Qty		F/N	Ref Des	Substitute For	Rev	Туре
000000022	01	Part	EC Part	1.0	Ð	1		0000000111	00	Part

A derived part is a component created by cloning a part.

Derived From page shows the parent part

Derived From Derived To Change -		• • • • • • • • • • • • • • • • • • • •	≩ ∭ ⅔-
Source Name 🔺	Derived Name	Derived Description	Derived Part State
€ 000000002	000007400		Preliminary

Derived To page shows the parts created by copy

Derived From Derived To			
Change - 📑 👬 🗛	<u> </u>	• 📰 • 🔜 🖉 🏹	🔮 🧮 🔆 -
Derived Name .	Source Nam	Derived Description	Derived Part Sta
	000000002		Preliminary

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Collaboration

Page contains information related to processes that involves other users.

About Route, see chapter "Part Categories"; about Issues, see chapter "Issues"

453050 BRAKE DUAL C	CCT 2.5MM State : Publish				
👼 Part (00)	Owner : Corporate	ate			
	Modified : Feb 29, 2016	4:00:20 PM			
453050 00	Route Issues Subsc	ribe			
Bill Of Materials	🔊 🔊 🕷 🖓 -				
Change Management		Tupo	Empil Address		
Specs & Documents		туре	Email Autress		
Related Parts		Event			
Collaboration	Part Approved	Event			
Manufacturing Details	🛨 🔄 Part Deleted	Event			
Vendor Part Numbers	🛨 🔄 Part Obsolete	Event			
CMS Information	Ŧ 🔄 Part Released	Event			
Tool Parts	Part Revised	Event			
Referenced By					

The tab Subscribe allows users to manage subscriptions for current parts.

The function can be used also for other PLM objects, like documents, routes and issues.

About part subscription, the table shows the events that the user can subscribe; the previous picture shows the events available for EC Part; about Sketch parts, the events are different

Route Issues Subso	cribe
2 🖻 👕 🐨 🚏	🔜 🔆 ·
Subscription Events	Туре
	Event
Part Complete	Event
■ Part Deleted	Event
Part Moved to Production	Event

Toolbar icons:

The icons contained in the part details toolbar depends on user permission and part state:



The following functions are available (user has to select event and after select the icon):

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Push Subscription: allows users to create a subscription to other users

Expand: allows users to expand all levels or selecting the number of levels, in order to see person involved

User can expand the events in order to see all person involved



User can create new subscription also using the dedicated icon Solution contained in Part Details toolbars

0000000105	Housing	State : F Owner : ma Modified : N	Preliminary atthew.spiteri far 30, 2016 12:04:3	Drop files here		
000000105 01	Prop	erties I	Material Parts	CMS Information		
Bill Of Materials		a 🖣 🗸	≽ 💿 😑 🗖	I 🚱 🔆 -		
Change Management	Name		000000105	000000105		
Specs & Documents	Origin	ator	Matthew Spite	Matthew Spiteri		
Related Parts	Part C	lassification	Moulded Parts	3		
Collaboration	Descri	iption	Housing			

Version	5	Date:	12-Dec-2016	
Status	Template			86

Manufacturing Details

Page shows the plants where the current part are used.

090100 DURE Material Part (00) -	THAN BKV 30H 1.0 000000 State : Owner Modifie	Publish : Corpora ed : Mar 31	te , 2016 10:	32:45 AM				<n <=""> k</n>
090100 00	Manufacturing Res							
Bill Of Materials	🖉 View Current & Pending	✓ Revi	sion Cu	irrent 🗸 🛛 Filter	2	्रि- 📴- 📰 - 🔜	27 😪	≣ ☆-
Change Mgt PowerView		Tune	Con	Dart Davision	Status.	Description	MEC Change	Tarrat Start Data
Specs & Documents		Type	Seq	Part Revision	Status	Description	WFG Change	Target Start Date
Collaboration	🖃 🗔 👪 090100	Mat				DURETHAN BKV 30H 1		
Multiple Ownership	🛨 🔄 📾 Egypt	Plant	1	00	Current			
Access	🕢 🗃 🖬 Malta	Plant	1	00	Current		MCO-0000270	Feb 22 2016;
Manufacturing Details								
Vendor Part Numbers								

The plant is defined by MBOM Engineer after Design Engineers approval; the users with roles Design Engineer can only view the plant definition.

Version	5	Date:	12-Dec-2016	
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Vendor Part Numbers

Page shows the Vendor Part Numbers, retrieved from CMS Malta and Egypt, related to current part

2BC0429000 BASE COAT	State : Publish Owner : Corporate Modified : Mar 1, 2016 1:43:32 Pl	Λ
2BC0429000 00	🔍 - 📴 - 📰 - 💭 🚺	8 💎 🗏 🔆 -
Bill Of Materials	Name	Customer / Supplier Name
Change Management		
Specs & Documents	05-7004-516.800	SCHRAMM Coatings GMBH
Related Parts		
Collaboration		
Manufacturing Details		
Vendor Part Numbers		
CMS Information		

The information retrieved from CMS systems are the Vendor Part Number and the Supplier Name

The Vendor Part Number can be searched

🖉 Disable+ 👗 Coo	okies• 🎢 CSS• 📋 For	ms+ 🔟 Images+ 👔	Information-	Miscellan	eous+ 🥖 (Dutline• 🧳	🖊 Resiz
is in	3DEXPERIENCE EN	IOVIA Engine 🗚	• 05-7004-516.8	800	٥	۹ 🎙	
Search Refinement	:	Search Results	1-1(of approx. 1 R	lesults Pa	ge Size: 5	0
Search 05-7004-516.800	QØ	€ Q• ×	₽ .	. .	•	≡ %·	-
 Taxonomies 		Display Name		Revision 🔛	Туре	Policy 🔺	Descrip
▼ Types		05-7004-5	16.800	00	Ven	EC	

The Vendor Part Number form has no information; the form contains only the link to Methode Part Number

	05-7004-516.800 Vendor Part Number (00)	tate : Publish Crimer : User Agent								
		Modified : Feb 5, 2016 4:47:21 PM	dified : Feb 5, 2016 4:47:21 PM							
	05-7004-516.800	🖫 - 📰 - 🔜 🏹 🗒	₽, ▥, ≦ ∠ 萬 ≫,							
		Name 🔺		Related Physical Title	Rev	Туре	Description			
1		B 2BC0429000			00	Part	BASE COAT			

Version	5	Date:	12-Dec-2016	
Status	Template			88

CMS Information

Page shows some information related to Costs and Customer Service Part Numbers, retrieved from CMS Malta, related to current part

Cost Part Manufactured

453050 00	Malta: Cost Part	. Malta: Cost Part	Customer Service				
Bill Of Materials	🗔 😪 🔆-						
Change Management	Standard						
Specs & Documents	Labour Standard	0.01710	Mate	terial Standard	0.53479	Burden Standard	0.11719
Related Parts	Actual						
Collaboration	Labour Actual	0.00000	Mate	terial Actual	0.00000	Burden Actual	0.00000
Manufacturing Details	Average						
Vendor Part Numbers	Labour Average	0.00000	Mate	terial Average	0.00000	Burden Average	0.00000
CMS Information	Total						
Tool Parts	Total Prod. To Date	0	Date	te	23/03/16		
Referenced By	Cost						
Classification PowerView	Standard Cost	0.68835	Actu	ual Cost	0.00000	AverageCost	0.00000
Issues	Other Cost						
	Other Costs (Standard)	0.01927	Othe (Acti	er Costs tual)	0.00000	Other Costs (Average)	0.00000
	Quantity						
	Standard Quantity	250	Actu	ual Quantity	0		
	Burden						
	Burden Standard Fixed	0.06654	Buro Varia	den Standard iable	0.05065	Burden Actual Fixed	0.00000
	Burden Variable						
	Burden Actual Variable	0.00000	Burg Fixe	rden Average ed	0.00000	Burden Average Variable	0.00000

Version	5	Date:	12-Dec-2016
Status	Template		89

Cost Part Purchased

Malta: Cost Par	t Malta: Cost Part	Customer Service					
🗔 😫 🛠	•						
Last Cost							
Last Actual Cost	3.45000	Last Actual Currency	EU				
Last Currency Rate	1.000000	Last Duty Rate	0.0000				
Last Unit Cost	3.45000	Last Currency Cost	0.00000	Last Freight Cost	0.00000		
Last Duty Cost	0.00000	Last Multiplier-1 Cost	0.00000	Last Multiplier-2 Cost	0.00000		
Last Multiplier-1	0.0000	Last Multiplier-2	0.0000				
Last Warehouse Charge	0.00000						
Standard Cost							
Standard Date	26/02/16	Standard Cost	3.45000	Standard Quantity	0		
Standard Currency Rate	1.000000	Standard Duty Rate	0.0000				
Standard Unit Cost	3.45000	Standard Currency Cost	0.00000	Standard Freight Cost	0.00000		
Standard Duty Cost	0.00000	Standard Multiplier-1 Cost	0.00000	Standard Multiplier-2 Cost	0.00000		
Standard Multiplier-1	0.0000	Standard Multiplier-2	0.0000				
Standard Warehouse Charge	0.00000						
Average Cost							
Average Cost	3.45000	Average Unit Cost	0.00000	Average Xchg Cost	0.00000	Average Duty Cost	0.00000

Customer Service Part Number

Malta: Cost Part Malta: Cos	t Part Customer Service				
耳 🗔 • 🖓 😫 🔆 •					
Methode Part Number 🛛	Customer Name	Customer Part Number	Description1	Description2	PLANT
090100	ARTI PLASTICS LTD.	090100			Malta
090100	CASTING GROUP SRL	090100			Malta
090100	ELEPAC LTD.	090100			Malta
090100	FILDAN ACCESSORIES LIMITED	090100			Malta
090100	KETEK LTD.	90100			Malta

Version	5	Date:	12-Dec-2016	
Status	Template			90

Tool Parts

Page shows the list of tools used to produce the part

453050 BRAKE DUAL 0	CCT 2.5MM State : Publish Owner : Corporate Modified : Feb 29, 2016	4:00:20 PM			
453050 00	🖉 📑 - 📑 - 📑 -	🚽 🖉 🟹 🧱 🗞 -			
Bill Of Materials	□ Name	Description	Usage Location	F/N	Estimated Cost P
Change Management			Malta	1	
Specs & Documents		ASST 316 - WATE SWIT	maita		
Related Parts	2679	ASSY JIG - VW ATL SWIT	Malta	2	
Collaboration	2680	ASSY JIG - VW ATL SWIT	Malta	3	
Manufacturing Details	2681	ASSY JIG - VW ATL SWIT	Malta	4	
Vendor Part Numbers					
CMS Information					
Tool Parts					
Deferenced Dy					

The tools are defined during RFQ process by Tooling Engineers and by Quoting Managers; the users with roles Design Engineer can view the tool definition and can add drawings to tools.

2678 ASSY JIG - VV Tool Parts	V ATL SWITCH State Owne Modifi	: Preliminary r: creator ed : Mar 4, 2016 6:33:58 PM				く合く
2678	Properties Lif	ecycle History Images Route				
Specs & Documents	a 🗉 😑 🗖	Q %-				
Collaboration	Name	2678	Revision		State	Preliminary
Multiple Ownership	Originator		Originated	Mar 4, 2016	Modified	Mar 4, 2016
Access	Part Classification	-	Quality Release			
Referenced By	Description	ASSY JIG - VW ATL SWITCH				
Classification PowerView	Design Purchase					
Issues	End Item	Yes				
	Tool Part Details					
	Usage Location	Malta	Tool Type			
	Estimated Cost		Prototype Cost			
	Cycle time (secs) / Shot	0	Tool life / shots		Number of Cavities	
	Machine Size (T)		Multiple Parts	N	Part Multiplier	1
	Additional Equipment		Mould Design Hours	0	Capital Investment	0,000
	Remarks					
	Technical					
	Net Weight	0.0	Gross Weight	0.0	Net Weight UOM	
	Carry Over Parts		Remarks			

Version	5	Date:	12-Dec-2016	
Status	Template		9)1

Referenced By

Page lists all PLM objects where the current part are used.

453050 BRAKE DUAL (CCT 2.5MM State : Publish Owner : Corporate Modified : Feb 29, 2016	5 4:00:20	PM				〈俞 〈 〉 🐔)
453050 00	🖪 - 🗊 - 📃 🏹 🗒	**						
Bill Of Materials	Namo	Boy	Tupo	Title	Description	State	Ownor	
Change Management		IVEA	Type	The	Description	State	Owner	
Specs & Documents	1.453050	00	Part		BRAKE DUAL CCT 2.5MM	Publish	Corporate	Ф
Related Parts	1.453050	00	Part		BRAKE DUAL CCT 2.5MM	Publish	Corporate	ц.
Collaboration	1.453095	00	Part		ATL BRAKE SWITCH	Publish	Corporate	ф
Manufacturing Details	1.453095	00	Part		ATL BRAKE SWITCH	Publish	Corporate	ф
Vendor Part Numbers	2.453050	00	Part		BRAKE DUAL CCT 2.5MM	Publish	Corporate	ф
CMS Information	2.453050	00	Part		BRAKE DUAL CCT 2.5MM	Publish	Corporate	ф
Tool Parts	3.453050	00	Part		BRAKE DUAL CCT 2.5MM	Publish	Corporate	ф
Referenced By	3.453050	00	Part		BRAKE DUAL CCT 2.5MM	Publish	Corporate	-æ
Classification PowerView	453050	Part	Part Master			Exists	UserAgent	ф
Issues	CA-0017420	-	Change Action		Import	Complete	joseph.zammit	ц
	CA-0017420	-	Change Action		Import	Complete	joseph.zammit	¢
	CA-0017420	-	Change Action		Import	Complete	joseph.zammit	Гф.
	📹 Malta	-	Plant			Active	Corporate	ф
	🕍 MCO-0018380		MCO			Implemented	Corporate	Гф.

It's similar to command Where Used, but the page shows also if there are Change objects, MCO objects (used by MBOM Engineers), the plants where part is used, RFQs that contains the part (if the part is the RFQ variant).

The page has no function to edit or expand the relationships.

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Classification Power View

Page lists the information related to the classifications of the current part.

090100 Materi	DURETI rial Part (00) -	HAN BKV 30H 1.0 000000 State : Owner Modifie	Publish r : Corporate ed : Feb 29, 2016	10:48:41 AI	л				〈令	< >	Ø
090100	0 00	Classification BO									к <mark>ж</mark>
Bill Of M	Materials	🗔 🗸 🎝 - 🗋 - 📑		7 5	7 💽 🗐	≫-					
Chang	e Mgt PowerView		,			- (F - 1)	01 15				
Specs	& Documents	Name 🔺	Туре	Revision	Policy	Part Family	Classifica	tion Attributes	F/N	Ref Des	Qty
Collabo	oration						Colour = Approval (Customer 3 =			
Multiple Access	e Ownership 3	■ ◯ 🛱 090100	Material Part	00	Manufactu	Materials	Remarks Approval (= Customer 2 =			
Manufa	acturing Details						New Deta				
Vendor	r Part Numbers										
CMS In	formation	< >	<								>
Tool Pa	arts										1 object
Refere	nced By	Classification									к ^и
Classif	fication PowerView	Classify ReClassify		. - 8	a. 📃 🛛	1 💎 💽 🕯	≣ % -				
Issues											
		Name 🔺	Туре	Title	C	escription		State	Owner	Classificatio	on Path
		Materials ABS	Part Family	Mater	ials ABS	laterials ABS		Active	Test Everything	Technical C	lassifica

The page is composed by two channels:

- The first channel shows the EBOM (user can use the icons contained in toolbar in order to expand the structure) with information related to part classification
- The second channel contains the classifications related to part selected in first channel

Version	5	Date:	12-Dec-2016	
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Classification BO							
🗔 🏯 🦓 r 🔒 r 🗔	- 🎫 - 🔍	27	' 😪 🗐 🎾	& -			
Name 🔺	Туре	Revision	Policy	Part Family	Classifica	tion Attributes	F/N
■ ○ → 456013	Part	00	EC Part				
□ ○ → 40686-08	Part	00	EC Part				4
■ ○ → 40732-01	Part	00	EC Part				8
52409-09	Part	00	EC Part				2
	Material Part	00	Manufactur,	Finished P	Quantity M View Deta	lultiplier = <u>iils</u>	1
⊡ ◯ 🔂 096515	Material Part	00	Manufactur	Finished P	Quantity M	lultiplier =	4
< >	<						
Classification Classify ReClassify	-	•- ==)- 🔜 🖉	7 🔮 🗮	%-		
Name	Туре	Title	D	escription		State	Owner
🗆 🗞 Finished Product	Part Family	Finist	ned Product F	inished Product	t	Active	Test Everyth

The Actions menu contains commands to manage classification



If user have no modification permissions, the toolbar will contain commands to manage classifications.



Also the part details form contains the information related to classifications: the lower portion contains the Classification Path and the attributes contained in classification definition; using icon Edit, user is able to enter and update attributes values.

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090100 00	Properties CN	IS Information	Lifecycle	Where Used	History	Images	Route		
Bill Of Materials	a 🗉 🕒 🗖	🖸 🔆 -							
Change Mgt PowerView	Europe	NO		С	hina	NO		US	NO
Specs & Documents	Technical								
Collaboration	Net Weight	0.0		G	ross Weight	0.0		Net Weight UOM	
Multiple Ownership Access	Carry Over Parts Similar Parts			R	emarks				
Manufacturing Details									
Vendor Part Numbers	Classification Path	Technical Clas	sification→Rav	v Material → Plast	tic→Materials/	ABS			
CMS Information	Materials ABS								
Tool Parts	Raw Material								
Referenced By	Supplier	Folgo							
Classification PowerView	Recycling Symbol	raise							
Issues	Approval Customer 1								
	Remarks								
	Approval Customer 4								
	Approval Customer 5								
	Colour								
	Approval Customer 2								
	Approval Customer 3								

Part can have several classifications

090100 00	Classification BO						
Bill Of Materials	🗔 😹 💑 - 🔍 - 🗔	- 🎫 - 🔜 🕻	7 😪 📰	≩ -			
Change Mgt PowerView		Time		Dent Fermilte		E AL	Def Dec
Specs & Documents	Name 🔺	Туре Ке	Policy	PartFamily	Classification Attributes	F/N	Rer Des G
Collaboration					Colour = Approval Customer 3 =		
Multiple Ownership Access	■ ◯ 👪 090100	Material Part 00) Manufactur	Materials A	Remarks = Approval Customer 2 = View Details		
Manufacturing Details							
Vendor Part Numbers							
CMS Information		1					_
Tool Parts							
Referenced By	Classification						
Classification PowerView	Classify ReClassify	7. 1 1.	- 19 - 📃 🖉	70.1	⋧-		
Issues							
	Name 🔺	Туре	Title	Description	State	Owner	Classification
	🗌 🚭 Finished Product	Part Family	Finished Product	Finished Produc	t Active	Test Everything	Technical Cla
	🗌 👼 Materials ABS	Part Family	Materials ABS	Materials ABS	Active	Test Everything	Technical Cla

Version	5	Date:	12-Dec-2016	
Status	Template			95

In case of several classifications, the part details form shows all attributes related to all classifications

090100 00	Properties CI	IS Information	Lifecycle	Where Used	History	Images	Route
Bill Of Materials	a 🗉 😑 🗔	Q %-					
Change Mgt PowerView	Similar Parts						
Specs & Documents	onniar r arts						
Collaboration	Classification Path	Technical Class	sification → Fini	shed Product			
Multiple Ownership Access	Materials ABS	Technical Class	sification → Rav	v Material → Plasti	:→Materials	ABS	
Manufacturing Details	Rav. Materia						
Vendor Part Numbers	Supplier						
CMS Information	IMDS Status	False					
Tool Parts	Approval						
Referenced By	Customer 1						
Classification PowerView	Remarks						
Issues	Approval Customer 4						
	Approval Customer 5						
	Colour						
	Approval Customer 2						
	Approval Customer 2						
	Finished Product						
	Finisned Froduct						
	Quantity Multiplier						

Version	5	Date:	12-Dec-2016	
Status	Template			96

Classify

In order to assign a classification, select command Classify: user has to enter Library and Class using button "...".

090100: Classify
& [*] / _* -
Fleids in red Italics are required
Library
Class
Done Cancel

If user select only Class, the table opened shows all classes (Part Families) defined for all classification; if user select first the Library and after the Class, the table opened shows only classes defined for selected classification.

The table initially is opened empty; select icon Search in order to perform the query.

Search Refinement	Searc	Search Results: 42, 1 selected						
Search	C	[÷	• - 📑 -	, 1	7 🏾	≈-		
Case Sensitive		🗌 Nai	me 🔺		Туре	Description	State	Classification Pa
Limit to 100 results			CuBe2		Part F	ML101 (CuBe2)	Active	Technical Cla 🔨
Туре	^	0	CuCo0.5Be		Part F	CuCo0.5Be	Active	Technical Cla
General Class Part Family		00	Finished Product		Part F	Finished Product	Active	Technical Cla
9		0	Materials		Part F	Materials	Active	Technical Cla
Name	(Materials ABS		Part F	Materials ABS	Active	Technical Cla
			Materials HDPE		Part F	Materials HDPE	Active	Technical Cla
Revision		🗆 🚭	Materials LDPE		Part F	Materials LDPE	Active	Technical Cla
State		00	Materials PA12-PA6-PA6		Part F	Materials PA12-PA6-PA6	Active	Technical Cla
Description		00	Materials PBT-PET-LCP-		Part F	Materials PBT-PET-LCP-PP	Active	Technical Cla
		🗌 📚	Materials PC		Part F	Materials PC	Active	Technical Cla
Policy			Materials PC-ABS		Part F	Materials PC-ABS	Active	Technical Cla
2		0	Materials Polymide Rubl		Part F	Materials Polymide Rubber	Active	Technical Cla
State		<	>	<				
	¥							Submit

User has to select the class (or classes) and select command Submit; after, the user is able to enter attribute values

Version	5	Date:	12-Dec-2016	
Status	Template			97

090100: Classify		
🚱 🔆 -		
Fields in red Italics are required		^
Library		
		_
Class		
Materials ABS		
Materials ABS		
Raw Material		_
Approval Customer 1		
		- 11
Approval Customer 2		
		.::
Approval Customer 3		
	Done	Cancel

The Classification PowerView is updated

090100 00	Classification BO						
Bill Of Materials		- 📰 - 📃 🕻	3 💎 😪 🗐 :	⋧-			
Change Mgt PowerView		T	nisian Ballan	Dent Franklin		5.41	0-60
Specs & Documents	Name 🔺	Туре ке	Policy	PartFamily	Classification Attributes	F/IN	Reid
Collaboration					Colour = Approval Customer 3 =		
Multiple Ownership Access	■ ◯ 👪 090100	Material Part 00) Manufacturi.	Materials ABS	Remarks = Approval Customer 2 = View Details		
Manufacturing Details					How Dotallo		
Vendor Part Numbers							
CMS Information							
Tool Parts							
Referenced By	< >	<					
Classification PowerView							
Issues	Classification						
	Classify ReClassify	-	• 🎫 🔜 🖉	7 🔮 🗐	*-		
	Name 🔺	Туре	Title	Description	State	Owner	Cla
	🗌 👼 Materials ABS	Part Family	Materials ABS	Materials ABS	Active	Test Everything	Tec

Version	5	Date:	12-Dec-2016	
Status	Template			98

Edit Attributes

In order to edit the attributes added by classifications, user has two options:

- Select command Edit Attributes in menu Action (command is available is user has the permission to modify part details)



- Select command View Details from classification form



The commands open a new window with classification attributes; user can select icon Edit and update attribute values.

Classification Attributes
Materials ABS
Raw Material
Supplier
IMDS Status False
Recycling Symbol
Approval Customer 1
Remarks
Approval Customer 4
Approval Customer 5
Colour
Approval Customer 2
Approval Customer 3
Cancel

Version	5	Date:	12-Dec-2016	
Status	Template			99

ReClassify

User can re-assign a classification to a part, using command ReClassifiy



The user has to select the classification to be updated and select command ReClassify; the process is the same described for command Classify.

After task completion, the previous classification will be replaced by new one; also the attributes added with first classification and not contained in second classification are removed, whereas the attributes contained only in new classification are added to part details.

Version	5	Date:	12-Dec-2016	
Status	Template			100

Remove

User can remove a classification from the part definition, using command Remove



The user has to select the classification to be removed and select command Remove; user has to confirm the task.

Removing classifications from object will cause all inherited attributes and their values to be removed from the object. This operation cannot be undone. If object is to be reclassified elsewhere first reclassify the object and then remove the current classes. Some attributes will be lost from object. To continue with the operation click OK. To cancel the operation click Cancel.

OK	OK	OK
----	----	----

After task completion, the selected classification will be removed; also the attributes defined with classification are removed if not contained in other classifications.

Version	5	Date:	12-Dec-2016	
Status	Template			101

Issues

Page lists the issues created on the current part.

0000000010 V1 Switc	h volume scenario 1 State : Pu Owner : Corp Modified : Ma	blish porate r 29, 2016 4:09:	19 PM				<合 <	\rangle
000000010 01	🚍 • 🖉 🛄 • 📑 •	2 🖉 🏹	' 📰 💸	•				
Bill Of Materials								
Change Management	Name	. Edi 🏤	6	Reported Against	Classification	Description	Visibility	Domain A
Specs & Documents			0	000000010		Tools not ready	Internal	Des
Related Parts			0	000000010	13306 - Аргові	Toola notready	Internal	De3
Collaboration								
Manufacturing Details								
Vendor Part Numbers								
CMS Information								
Tool Parts								
Referenced By								
Classification PowerView								
Issues								

.

Menu Action contains command to create new issue



About Issue creation and management, see document "PDPLS Users"

Version	5	Date:	12-Dec-2016	
Status	Template			102

ENG04 CAD Drawing management

Purpose	CAD Drawing management overview	Status	Define
Stakeholders	Design Engineers		
Beginning	Create a drawing; search and update a drawing		
Interactions			
End			
Constraints			
End Constraints			

Create New Drawings

The function to create a new drawing is contained in two toolbars:

- From tab My Drawings; in this case the drawing is created standalone

 Collaboration and Approvals 	My Parts Parts to Appro	ove	My CAD Drawings	CAD Drawings to
Home Change Management User	Name _	Rev	Description	Drawing Fo
Home Engineering User	 ☐ ∰ 000000003	00A	test	-
Home RFQ User	6 1000000000000000000000000000000000000	01C	test 1	MEM Com

- From menu Action in command Specification, related to a part; in this case the drawing is related to the part



The command opens a new window with all information managed for drawings.

The field Drawing Number is populated using the part number, if command used is Create Drawing from tab My Drawings, the field Drawing Number is empty

Version	5	Date:	12-Dec-2016	
Status	Template			103

	000000105 Create Specificat	
	😪 🔆-	
	Fields In red Italics are required	^
	Type CAD Drawing	
	Drawing Number	
	0000000105	
	Policy	
	Custom Revision Level	
	A00	
	Owner Matthew Spiteri	
	Design Responsibility	
	METHODE ELECTRONICS	
	Part To Connect 0000000105	
	Description	
	Brawing Format	
(- •	
	Notes	
> piect	Done Cancel	Ĭ

If command used is "Create New" from menu Action in Specification and if field Drawing Format has a value different from "-", then the Drawing Number is retrieved by the system (it means the value entered manually is not used); instead if Drawing Format value is "-" or drawing is created standalone, the drawing number is retrieved from field value.

Version	5	Date:	12-Dec-2016	
Status	Template			104

CAD Drawing is created and connected to part number

000000105 01	Specifications	Reference	e Docume	n						
Bill Of Materials	≡ * ⊒	<u>-</u> -	- 88 -		170	3 📰	-%			
Change Management						Devi		Turne	A	Description
Specs & Documents	Name 🔺		•		Title	Rev	ver	туре	Actions	Description
Related Parts	000000105	5	0/0		0000	00A		CAD	N 6	test
Collaboration										
Manufacturing Details										
Vendor Part Numbers										

Version	5	Date:	12-Dec-2016	
Status	Template			105

Drawing Details

Users can search for drawings using several functionalities (search using field in top bar, using a summary table like My Drawings, from table Specification in part categories, etc.).

0000000105 0000000105	test	State : Preliminary Review Owner : matthew.spiteri Modified : Mar 31, 2016 2:54:29 PM						
000000105 00A		≣ • 💸	-					
Files		Туре		CADE	rawing			
File Versions		Owner		Matthe	w Spiteri			
Route		Design Responsibility	/	METH	ODE ELECTR	RONICS		
Lifecycle		Originated		Mar 31	1, 2016			
Related Parts		Modified		Mar 31	1, 2016			
Revisions		Description		test				
History		Drawing Format		MEM Component				
Issues		Notes						
		Sub Code						
		Sub Type						
		Supporting Document Number						
		Supporting Type		-				
		Tooling Number 1						
		Tooling Number 2						
		📑 · 📰 • 🔜 🏹		7 ∭ ⅔-				
		File Name			-	Ver	Originated	

The drawing detail form is composed by the following section:

- System defined field:
 - o Type, Name, user originator, originated date, last modified date
- Attributes specific for drawing type:
 - Description, Drawing Format, Notes, etc.
- Table with files uploaded

Menu Actions:

The menu Actions contain depends on user permission and drawing state:

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Status	Template			106



- Edit Details: allows users to update drawing information
- Upload/Check In: allows users to upload new files
- Update Files: allows users to update existing files, in order to create new versions
- Download: allows users to download existing files
- Checkout: allows users to download and lock existing files, in order to create new versions
- Delete All Versions: delete all files uploaded
- Transfer Ownership: used to change the owner of the drawing
- Add to Clipboard: common function to add drawing number in Clipboard, in order to be used in other functionalities, like Add Existing in part Specification (see document "Basic Training")

Menu Category:

The menu Category contains the following commands:

- Name: Drawing Number, it's also a link to drawing details form
- Files: allows users to see all files uploaded, only last versions
- File Versions: allows users to see all files uploaded, all versions
- **Route:** allows users to create additional approval process, other than mandatory approval by Senior Design Engineer
- Lifecycle: allows users to view and update drawing state
- Related Parts: allows users to search for parts related to drawing
- **Revisions:** allows users to view and create new drawing revision (Change Reference and Change Notice)
- **History:** allows users to view all actions performed on drawing information (see chapter "History" in "Part Header portal")

Version	5	Date:	12-Dec-2016	
Status	Template			107

Edit Details

User can update drawing information; select command Done when complete

Select command Edit Details from menu Actions

000000105 00A	Edit Spec Details	
Files	×~-	
File Versions	1 C	Fields in red italics are required
Route	Name	0000000105
Lifecycle	Owner	Matthew Spiteri
Related Parts	Design Responsibility	METHODE ELECTRONICS
Revisions	Originated	Mar 31, 2016
History	Modified	Mar 31, 2016
ISSUES	Description	
	Drawing Format	MEM Component
	Notes	
	Sub Code	
	Sub Type	
	Supporting Document Number	
	Supporting Type	- ¥

The function is available only in state Preliminary and only to drawing owner; it's also available in state Review only to users with role Senior Design Engineer

Version	5	Date:	12-Dec-2016	
Status	Template			108
Upload/Check In

The command allows user to upload new files

Select command Upload/Check In from menu Actions; the command opens a new window

Checkin Files		
×-		
File Format	Comments	$]^{}$
Browse 57770_ss_button.pdf		
Browse No file selected.		
generic 🗸		
Browse No file selected.		
generic V		
Browse No file selected.		~
	Done Cance	

User has to select one or more attachments and confirm

Last portion of drawing form is a table with all files attached; files table shows only last version of documents.

То	oling Number 1								
То	oling Number 2								
	•• 🖩 📃 🏹 🇮 :	⅔-							
	File Name 🔺		Ver	Originated	Comments	Originator	Format	File Size	Actions
	57770_ss_button.pdf		1	Mar 31, 201		Matthew Sp	generic	219.98 KB	® <u>*</u> <u>*</u>

Version	5	Date:	12-Dec-2016	
Status	Template			109

Update Files

The command allows user to update existing files, in order to create new versions.

In order to create a new version, a file has to be locked.

In order to lock, user can use the dedicated icon contained in file table

Tooling Number 2											
📄 File Name 🔺	8	Ver	Originated	Comments	Originator	Format	File Size	Actions			
57770_ss_button.pdf		1	Mar 31, 201		Matthew Sp	generic	219.98 KB	•			



- View: download the file in order to view content (application used to view the content has to be installed on client)
- 📲 Download: download the file on client
- Checkout and lock: download the file on client and lock the file in order to create a new version
- 📓 Lock: lock the file in order to create a new version

User has to select icon to checkout and lock the file (user can also download and lock file in different sessions).

	Fooling Number 2										
l	□□- 💭 🗐 🏷-										
	File Name 🔺	-	Ver	Originated	Comments	Originator	Format	File Size	Actions		
] 57770_ss_button.pdf		1	Mar 31, 201		Matthew Sp	generic	219.98 KB	O <u>i</u> 2 4		

After lock the file, the icons are changed: object is locked and a new icon is present, to checkin a new version Tooling Number 2



Version	5	Date:	12-Dec-2016	
Status	Template			110

User has to update the file downloaded; in order to upload the new version, select command Upload Files from menu Actions or select icon Checkin from file table; the command opens a new window.

The user has to select the file updated, enter a comments (mandatory) and select command Dine

Update Files	
Current File Updated File Format	Comments
Browse 57770_ss_button.pdf generic	New version
	Done Cancel

The file is updated and a new version is uploaded.

Tooling Number 2	%-							
🗌 File Name 🔺	8	Ver	Originated	Comments	Originator	Format	File Size	Actions
57770_ss_button.pdf	(2	Mar 31, 201	New version	Matthew Sp	generic	219.98 KB	◈⊻₿⊜

Version	5	Date:	12-Dec-2016	
Status	Template			111

Transfer Ownership

The command allows user to change the owner of the drawing.

Only the drawing owner can update drawing information or upload files; if drawing has to be managed by other users, the drawing owner has to transfer the ownership to selected users

Select command Transfer Ownership from menu Actions

Transfer Ownership:	CAD Drawing 000000
**	
	Flekis In red Italics are required
New Owner	matthew.spiteri
Organization	Malta 🗸
Collaborative Space	GLOBAL V
	\frown
	Done Cancel

Owner has to search for another user and select command Done.

After changing the drawing owner, functions to update drawing is no more available

	o trior : matarotr.op									
CAD Drawing (00A)	Modified : Mar 31, 20	016 4:55:13	3 PM							
000000105 00A	(📥 🧧 🔆 -									
Files		CAD Dr	awing							
File Versions	Owner	Matthew	v Spiteri							
Route	Design Responsibility	METHO	THODE ELECTRONICS							
Lifecycle	Originated	Mar 31,	2016							
Related Parts	Modified	Mar 31,	2016							
Revisions	Description	test								
History	Drawing Format	MEM Co	omponent							
Issues	Notes									
100000	Sub Code									
	Sub Type									
	Supporting Document Number									
	Supporting Type	-								
	Tooling Number 1									
	Tooling Number 2									
	📭 · 📰 • 📄 🏷	7 🏾 🔊	≈-							
	📄 File Name 🔺			Ver	Originated	Comments	Originator	Format	File Size	Actions
	57770_ss_button.pdf	f		2	Mar 31, 201	New version	Matthew Sp	generic	219.98 KB	•

Version	5	Date:	12-Dec-2016	
Status	Template			112

Add to Clipboard

The command allows users to add drawing number in Clipboard, in order to be used in other functionalities, like Add Existing in part Specification

From menu Actions or from toolbar (depends on user permission), select command Add to Clipboard



The system pop ups an alert the drawing is added to Clipboard

Selected item(s) have bee	en added to collection/collections
	ОК

In order to add the drawing selected to a part, search for the part and select command Specification; from menu Actions select command Add Existing



Version	5	Date:	12-Dec-2016	
Status	Template			113

The table with query results has a toolbar with an icon used to view Collection content, like Clipboard; user has to select the icon in order to view Clipboard content

Search Refinement	Search Results	1 - 2 of approx. 2 Res	ults Pa	ge Size: [50 🕨 (Max Valu
Q2	🗄 🔾 🔹	🖫 - 📰 - 🔜	```	È-	
Policy: ⊡!= Version	🗌 Name 🔺 Ӵ Ad	d to Clipboard	evision	Туре	Description
▼ Taxonomies	🗌 🛱 00000 * Ne	w / Add to Collections	0B	CAD	test
 Types 	🗌 🛱 45305 Clip	board	4E	CAD	MEM Assembly Drav
DOCUMENTS(36245)					
✓ Attributes					
Name					
Originated					
Modified					
Description					
Checkin Reason	<	> <			> Submit

Version	5	Date:	12-Dec-2016	
Status	Template			114

Drawing Categories

Users can search for drawings using several functionalities (search using field in top bar, using a summary table like My Drawings, from table Specification in part categories, etc.).

Files and File Versions

The command Files allows users to see all files uploaded, only last versions

000000105 00A	■ • ■ • ? % •								
Files		-			-				
File Versions			Ver	Originated	Comments	Originator	Format	File Size	Actions
Route	57770_ss_button.pdf		2	Mar 31, 2016 4:55:12 PM	New version	Matthew Spiteri	generic	219.98 KB	۹ کے 🌑
Lifecycle									

The menu Actions contains commands to update versions, delete last version and delete all versions.



The command File Versions allows users to see all files uploaded, all versions

CAD Drawing (UVA)		Modified . Mar 31, 2010 4.55.13 PM						
000000105 00A	-	₽. 7 %.						
Files								
File Versions	Ver	File Name	Originated	Comments	Owner	Format	File Size	Actions
Route	1	🛱 57770_ss_button.pdf	Mar 31, 2016 4:40:56 PM		Matthew Spiteri	generic	219.98 KB	۰ 🛓
Lifecycle	2	🛱 57770_ss_button.pdf	Mar 31, 2016 4:55:12 PM	New version	Matthew Spiteri	generic	219.98 KB	ک 🔄
Related Parts								
Revisions								

The command has no menu Action, the user is able to download also old versions

Version	5	Date:	12-Dec-2016	
Status	Template			115

Lifecycle

The command allows users to view and update drawing state

000000105 00A	Lifecycle					
Files	0000000105 rev 00A: Lifecycle					
File Versions						
Route						
Lifecycle	Dralim		round	Dublich	Concelled	
Related Parts	Freinin		noveu	Fublish	Cancelleu	
Revisions						
History						
Issues	Tasks/Signatures Approvals Image: Signature state Image: Signature state Image: Signature state Image: Signature state Image: Signature state Image: Signature state	- ⊒ [] ⊞ []] 7 😫 %	•			
	State Assignee	Task/Signature	Task Title	Comments/Instructions	Action	Du
	Preliminary					
	🗌 Review 🛛 🕏 Senior Design	n Engineer 🥒 Senior Design Engineer			Pending	
	Approved					
	Publish					
	Cancelled					

Form shows the lifecycle of the drawing:

- The first portion shows the current state; the toolbar contains the commands to promote or demote the drawing state
- The second portion is composed by two tabs:
 - Tasks/Signatures can be used to approve or reject, if drawing state is Review
 - o Approvals shows when the drawing was promoted and the users that complete the tasks

CAD Drawings are governed by policy with following states:

- Preliminary: only CAD Drawing owner can update object, all Design Engineers are able to view the document; Purchasing and Change Coordinator can view the document
- Review: used by Senior Design Engineer to approve or reject drawing
- Approved and Publish: CAD Drawing is visible to other users
- Cancelled: all Design Engineers are able to view the document, only Senior Design Engineer can revise the drawing

CAD Drawing owner can delete object in state Preliminary.

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Status	Template			116

Drawing state promotion and demotion

In order to approve a part, all specifications connected have to be approved before part approval.

The users involved in drawing promotion are the following:

- State Preliminary: Product Design Engineer or Electrical Design Engineer users can promote from state Preliminary to state Review
- State Review: Senior Product Design Engineer or Senior Electrical Design Engineer users can promote from state Review to state Approved
- State Approved: Senior Product Design Engineer or Senior Electrical Design Engineer users can promote from state Approved to state Publish

Promote from state Preliminary to state Review

In order to promote a drawing from state Preliminary to state Review, the user can use the following functions:

- The dedicated portion in part header
- The icon contained in lifecycle toolbar
- The command contained in lifecycle menu Action

000000105	test Staie: Preliminary -> Review
000000105	Owher: we be we sold of a sold
CAD Drawing (00A)	Modified : Mar 31, 2016 4:55:13 PM
000000105 00A	Lifecycle
Files	000000105 rev 00A: Lifecycle
File Versions	
Route	
Lifecycle	reliminary Review
Related Parts	Lemote
Devisions	

- Tab "My View" contains CAD Drawings in status Preliminary belonging to user; Design Engineer has to select drawings to approve and promote to status Review using dedicated icons contained in toolbar

My Parts Parts	to Approve	My CAD Drawings	CAD Drawings to A	Change Reques
		🖬 • 📄 🖉 🖗	2 🗏 🔆 -	
✓ Name ▲	Re	Description		Comme
✓ [™] 000000005	А	Socket		

These functions are available only to drawing owner.

Version	5	Date:	12-Dec-2016	
Status	Template			117

In order to promote a drawing from state Preliminary to state Review, the owner has to upload at least one file.

Promote from state Review to state Approved

Tab "CAD Drawing to Approve" contains CAD Drawings in status Review, ready to be approved by Senior Design Manager. The tab is available only to users with role Senior Design Engineer.

In order to promote the drawing from state Review to Approved, the user has to enter an electronic signature. If the user tries to promote the drawing state without apply the signature, an error message is shown

Promotion Failed: Cannot promote - all re	quirements not satisfied
	ОК

The tab Tasks/Signature contains the function to approve or reject the drawing:

Lifecycle				
0000000105 rev 00A: Lifecycle				
🚍 - 🖌 🎵 Go To Cano	celled 🗔 🔆			
Prelimi	nary — Review	Approved —	Publish	Cancelled
Tasks/Signatures Approvals	•			
Show: All Approvals 🗸 Approval St	atus: All 🗸 Include: Curr	ent and Related Tasks 🗸	Filter	
🏟 Name 🗅	Approver	Title Approva	l Status	Approval/Due Date C
Senior Design Engineer	Senior Design Engineer(Role)	Awaitin	g Approval)

In order to enter the electronic signature, select the link Awaiting Approval or the link in Lifecycle form.

Version	5	Date:	12-Dec-2016	
Status	Template			118

The system opens a new window; the user has to select the checkbox Approve, enter an optional comment and select command Done

Approval	
🚱 🔆 -	
Fleids in red italics are required.	
Approval	Senior Design Engineer
Comments	Drawing approved
Action	Approve Approve Ignore
	Done

After, the user has to promote the drawing state using the icon

In order to reject the drawing, user has to select the checkbox Reject, enter a comment and select command Done

Approval	
Q 🔆 -	
Fleids in red Italics are required.	
Approval	Senior Design Engineer
Comments	Check drawing: provide notes
Action	Approve Reject Jynore
	Done Cancel

Version	5	Date:	12-Dec-2016	
Status	Template			119



After, the user has to demote the drawing state using the icon

The owner, in tab "My CAD Drawing", can see the drawing rejected and the comment

Parts Parts to Approv	ve	My CAD Drawings CAD	Drawings to A	CAD Drawings t	o R Electronic Compon	»	
¢ 🎗 📮 🔒 -	-	📰 • 🔜 🖉 🏹 🚱	圖 🔆 -				
ne 🔺	Rev	Description	Drawing Format	Supporting Type	Supporting Document Number	Reject Comment	Sta
000000003	00A	test	-	-			Pre
000000010	01C	test 1	MEM Compo	N/A			Pre
000000105	00A	test	MEM Compo	-	(Senior Design: Check drawing:	Pre
000007011	00B		-	-			Pre
453052-A	05H	MEM Assembly Drawing	MEM Assemb	Change Notice	E14109		Pre
5897	00A		Lab Jig	-			Pre
L-SN000007366	00A		Lab Jig	-			Pre
L-SN5897	00A		Lab Jig	-			Pre
P-000000010	00A		P-Layout - D	-			Pre
	Parts to Approv Parts to Approv Image: Status 0000000003 0000000105 000000105 000000105 000000105 0000000105 0000000105 0000000105 0000000105 0000000105 0000000105 0000000105 000000000000000000000000000000000000	Parts to Approve Parts to Approve Image: Constraint of the sector of the se	Parts Parts to Approv My CAD Drawings CAD Image: Comparison of the state of t	Parts Parts to Approve Imy CAD Drawings CAD Drawings to A Image:	Parts Parts to Approve Imp CAD Drawings CAD Drawings to A CAD Drawings to A </td <td>PartsParts to ApproversionalMy CAD DrawingsCAD Drawings to ACAD Drawings to AElectronic ComponentImage: Image: Im</td> <td>Parts 0 Approv My CAD Drawings CAD Unawings to A CAD Drawings to A CAD Drawin</td>	PartsParts to ApproversionalMy CAD DrawingsCAD Drawings to ACAD Drawings to AElectronic ComponentImage: Image: Im	Parts 0 Approv My CAD Drawings CAD Unawings to A CAD Drawings to A CAD Drawin

The owner has to apply the correction (i.e. creating a new version or updating the drawing information) and promote again the drawing state to Review.

Promote from state Approved to state Publish

Tab "CAD Drawing to Release" contains CAD Drawings in status Approved, ready to be published by Senior Design Manager. The tab is available only to users with role Senior Design Engineer.

In order to promote a drawing from state Approved to state Publish, the user can use the following functions:

- The dedicated portion in part header
- The icon contained in lifecycle toolbar
- The command contained in lifecycle menu Action

0000000105 0000000105 🛱 CAD Drawing (00A)	test Statu: Preliminary Review Ownet: ##hew spiteri Modified: Mar 31, 2016 4:55:13 PM
000000105 00A	Lifecycle
Files	0000000105 rev 00A: Lifecycle
File Versions	
Route	
Lifecycle	Promote
Related Parts	a Demote
Devisions	

Promote from state Review to state Cancelled

Version	5	Date:	12-Dec-2016	
Status	Template			120

Product Design Engineer or Electrical Design Engineer can move state drawing to Cancelled, using the dedicated command contained in Lifecycle toolbar.



Version	5	Date:	12-Dec-2016	
Status	Template			121

Related Parts

(P

The command allows users to search for parts related to drawing

🛱 CAD Drawing (00A)	Modified : Mar 31, 2016 5:33:	15 PM			
000000105 00A	🔹 📑 📰 - 💭 🏹	7 🔳 🔆 -			
Files	Name .	Туре	Rev	Description	State
File Versions		.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		booonphon	otato
Route	000000105	Part	01	Housing	Preliminary
Lifecycle					
Related Parts					
Revisions					
History					
Issues					

The command is used also to connect drawing to multiple parts; the toolbar contains command to add an existing part and disconnect a part already connected.

Add Existing: allows users to search for parts to connect to drawing

Disconnect: allows users to remove relationship between selected parts and drawing

Version	5	Date:	12-Dec-2016	
Status	Template			122

Revisions

The command allows users to view and create new drawing revision (Change Reference and Change Notice)

CAD Drawing (00A)	Modified : Mar 31, 2016 5:33:15 PM					
000000105 00A	Revise CN Revise CR 🖉		• 🖩 - 📄 🏹 🖼 💸 -			
Files	Name 🖕		State	Туре		
File Versions						
Route	0000000105	00A	Preliminary	MEM Drawing		
Lifecycle						
Related Parts						
Revisions						
History						

Drawings can be revised with a Change Notice process or a Change Reference process.

Users with roles Senior Design Engineer and Design Engineer are able to create a new revision, even if part state is Preliminary; the user creating the new revision is responsible to decide if a change has to be implemented as Change Notice or Change Reference process.

The commands Revise CN and Revise CR are similar: user has to select command from toolbar; the command opens a new window with drawing details

	Revise	
	🗟 🔆 -	
	Fields In red Italics are required	^
5	Type CAD Drawing	
Ē	Name	
	Policy MEM Drawing	
	Custom Revision Level	
	Owner Matticew Spiteri	
	Revision Comments	
(]	
	Description	
	test	
		~
1 object	Done	

Version	5	Date:	12-Dec-2016	
Status	Template			123

User has to enter a revision comment and select command Done; all other information are populated by system

The only difference is related to Custom Revision Level field: command "Revise CN" updates index and last digit portion, command "Revise CR" only last digit portion

Drawing with revision 00A:						
Revise CN	Revise CR					
Custom Revision Level	Custom Revision Level					
01B						

After new drawing revision is created, the commands used to create new revision are not available because the user has to select the new revision (commands are available only with last drawing revision) Only icon Edit is available, in order to update the Revision Comments, only for drawing in state Preliminary

Modilied . Mar 51, 2016 5.55.15 PM						
🖉 🔜 - 📰 - 🔜 🏹	圌	×-				
Name 🔺	Rev	State	Туре	Revision Comments		
8 000000105	00A	Preliminary	MEM Drawing			
8 000000105	00B	Preliminary	MEM Drawing	New CR for update drawing notes		

New CAD Drawing revision will be connected to part only after approval process. Meanwhile, part is connected to previous released CAD Drawing.

000000105 01	Specifications Reference	e Docum	en						
Bill Of Materials	≡ • * □ □ • □	- 88	• 🔜 (87		# X	-		
Change Management				T:41-			T	A	Deserved
Specs & Documents			-	Title	Rev	ver	туре	Actions	Desci
Related Parts	🔲 🛱 000000105	0/1		000	00A	2	CAD	》 …	test
Collaboration									
Manufacturing Details									

The EBOM table shows an icon to specify that part is connected to a drawing that is not the last revision

000000105 01	EBOM EBOM Common	MBOM Plant Specif W	/here Use
Bill Of Materials	📃 - Reports - 🥒 🏄	i 🗈 江 🔽 🙆 💿 🛛	Markup 🚽
Change Management			To
Specs & Documents	Name		Iy
Related Parts	O00000105 O	OOA (NEM Compon	ient) EC
Collaboration			Sk
Manufacturing Details	₽ □ ₩ 000007392		Sk
Vendor Part Numbers			5.
CMS Information			E
		Deter	12

Version	5	Date:	12-Dec-2016	
Status	Template			124

Version	5	Date:	12-Dec-2016	
Status	Template			125

ENG05 CBOM management

Purpose	Design Engineers define CBOMs related to new variants or updates	Status Define				
	CBOMs related to existing variants					
Stakeholders	Design Engineers					
Beginning	RFQ has variants and has moved to status "Concept BOM"					
Interactions	Design Engineers have to complete CBOMs definition related to variants contained in RFQ.					
	Manager can add Sketch parts or existing parts, completes Technical information, compare					
	CBOMs, approve CBOMs					
End	CBOMs are completed					
Constraints						

CBOM Creation

Quotation Manager promotes the RFQ package to the state "Concept BOM"; user assigned to complete the CBOM in RFQ package receives a notification task dashboard.

Step 1 Select Project User command, select Tasks tab, select hyperlink related to RFQ name

 Collaboration and Approvals 	Tasks Approval Tasks	Proj	ects	ssues	Approval Issue	es My	Calendar		
Home Change Management User	Tasks Filter:Assigned Tasks	. .	5 🔊	7 <table-cell> 1</table-cell>	≣ ⋧ ∙				
Home Engineering User						Ct-t-	% Complete	Designt	E-4 (
Home Project User		*	Slip Days	흰	앨	State	% Complete	Project	ESU :
Home	Change in led colour	r	8	0	0	Review	100	PCN 0000166	Nov
Issues Summary	Tool design reviews	1	3	0	0	Review	100	MTool1	Oct
Shortcuts									
Collections	TFC	r	0	0	0	Review	100	RFQ000001-01	Nov
Tasks	Tweaking of resistance	1	0	0	0	Review	100	CN 0000166	Dec
Subscriptions	BOM Concept	_	0	0	0	Accian		RE0000005.01	Dec
Meetings		_	U	U	U	Assign		RI (200003-01	Dec
My Calendar	BOM Concept		0	0	0	Review	50	RFQ000004-01	Dec
Decisions	Lab Testing and Equipment		0	0	0	Assign		RFQ000004-01	Dec
Discussions	Modification of PCB size/desi	ç	0	0	0	Assign		2000166 Michael 2010	Dec

Version	5	Date:	12-Dec-2016	
Status	Template			126

Step 2 Select command Variants

RFQ000005-01	^ 🔳 - 🖉 🛄 - 🗔 - 🕫	.	2 🟹 🧮 🔆 -
Folders	□ Name ▲	Rev Type	Description
Sales Options	000000552	A Sket	Switch Window lifter
Estimated Volumes	000000553	A Sket	Switch Color white
Lifecycle	000000554	A Sket	Switch color black
Members			

Step 3 For each variant, select part number from table and select Bill of Material command

Drop images here Part (A)	Din Bajo = Base Variant + Round Terminals + Analog Output + Protection to 5.5	State : Owner : Te Modified :	Create est Everyt 5/11/201	Peer hing 5 11:16:0	Review	Drop files here		
000000052 A	EBOM EBOM Commo	n MBOM	Plant Sp	ecif	Wher	re Used	Mar	kups
Bill Of Materials	Reports -	1 1 1	*	30	Marku	р -	64	Change - 🐁 - 🔹 - 🚎
Equivalents		Tune	Ctata	Dev		04	LL of M	Description
Change Management		Туре	State	Rev	F/IN	Qty	U OT IVI	Description
Specs & Documents	■ □ 4 000000052	Sketch Part	Create	А			EA (Din Bajo = Base Variant + Round .
Related Parts								
Collaboration								
Multiple Ownership Access								
Manufacturing Details								
Customer Supplier Part N								
Technical Notes								
CMS Information								

Version	5	Date:	12-Dec-2016	
Status	Template			127

EBOM EBOM Common
Reports -
Create Parts
Add Existing
Add Existing Pkg -
Add Electronic Components
Import EBOM
🖶 Copy From
🖶 Сору То
⇔
🚰 Change Position
A Replace with Existing
■ Remove

Select Create Sketch Part command to add new sketch parts

() meth2015.gruppocdm.it	8080/enovia/common/emxCreate.jsp?na	ameField=autoName&policy=p	olicy_DevelopmentPart&showPol	<u>@</u> . ↓
0000000052 Create	e Part			
😪 🔆 -				
	Fields in red italics are required			
Туре	Part			
AutoName Series	Part Number 🗸	Number of Parts	5	
			Done	el

Select Add Existing command to add existing parts

Version	5	Date:	12-Dec-2016	
Status	Template			128

Search Refinement	Search Results			Re	sults: 100, 3 se	lected
Search Q	🔄 🕒 • 📑 •		7 🔳 %	b -		
☑ Case Sensitive	🗌 Name 🔺	Rev	Туре	Description	State	
Limit to 100 results	□ 🐡 000000004	1	Part		Preliminary	₽ ^
Туре	🗆 🌼 16297	1	Part	PCB Assy EPB with Alps	Preliminary	₽
Part	🗆 🌞 16298	1	Part	PCB-Assy Roof with Alps	Preliminary	Ð
Name	⊻ ∰ 16401	1	Part	РСВ	Preliminary	æ
	⋥ ∰ 30608	1	Part	Roller	Preliminary	Ð
Revision	🗆 🤑 40757	1	Part	Main Spring	Preliminary	Ð
C 🗌 Highest 🗌 By State	√ 🕸 40768	1	Part	Plunger Spring	Preliminary	æ
Policy	🗆 🌼 40819	1	Part	indexing Spring	Preliminary	Ð
EC Part	🗆 🏟 453050	1	Part	BRAKE DUAL CCT SW	Preliminary	Ð
State	🗆 🌼 453051	1	Part	BRAKE DUAL CCT SW	Preliminary	Ð
	🗆 🏶 52581	1	Part	Plug	Preliminary	Ð
Q	□ & 52819 < >	1 <	Part	Plunder	Preliminary	₽ ×
Originated					Done Car	ncel

CBOM can contain Sketch Part (type "Sketch Part") and definitive Part Number (type "EC Part")

EBO	M EBOM Commo	n MBOM Plar	nt Specif	Whe	re Used	Mar	kups			
	Reports 🗸 🥒	a t 1 4	f 🛃 🗖	Marku	ip 🖌 🧐	4	Ch	ange 🗸 👘 🔻 👘 🗧	7	
Nam	e	Туре	State	Rev	F/N	Qty	U of M	Description	Weight	F
- 4	000000052	Sketch Part	Create	А			EA (Din Bajo = Base Variant +	0.0 g	
] 🏰 000000056	Sketch Part	Create	А	10	1.0	EA (0.0 g	
] 🏰 000000057	Sketch Part	Create	- A	20	1.0	EA (0.0 g	
] 🛟 000000058	Sketch Part	Create	А	30	1.0	EA (0.0 g	
] 🌼 000000059	Sketch Part	Create	А	40	1.0	EA (0.0 g	
] 🛟 000000060	Sketch Part	Create	А	50	1.0	EA (0.0 g	
] 🤹 16401	EC Part	Released	1	60	1.0	EA (PCB	1.8 g	
] 🤹 30608	EC Part	Released	1	70	1.0	EA (Roller	0.2 g	
] 🖇 40768	EC Part	Released	1	80	1.0	EA (Plunger Spring	0.0 g	

Version	5	Date:	12-Dec-2016	
Status	Template			129

Step 5 For each variant, complete CBOM information

EBOM EBOM Com	non MBOM	Plant Specif.	1	Where U	sed	Markup	5		
🚍 - Reports -	1 I I I	. 米 🛃	3D N	Narkup 🗸	9	4 📊	Change - *	📥 🗖 📲 »	
Mass Update			-						Save Res
□ Name	уре	State	Rev	F/N	Qty	U of M	Description	Weight Part Wei	ght Gross / (grams)
♦ 000000052	etch Part	Create	А			EA (Din Bajo = Base Variant +	0.0 g	0.0 g
🗌 🏶 🙆 00000005	6 tetch Part	Create	А	10	1.0	EA (Housing	0.0 g	0.0 g
🗌 🏟 🙆 00000005	7 tetch Part	Create	А	20	1.0	EA (Indexing	0.0 g	0.0 g
🗌 🏶 🙆 00000005	8 tetch Part	Create	А	30	1.0	EA (Toggle	0.0 g	0.0 g
🗌 🏶 🙆 00000005	etch Part	Create	А	40	1.0	EA (Socket	0.0 g	0.0 g
🗆 🏟 🙆 00000006	cetch Part	Create	А	50	1.0	EA (Slider	0.0 g	0.0 g
🗌 🦚 16401	C Part	Released	1	60	1.0	EA (РСВ	1.8 g	0.0 g
🔲 🦚 30608	C Part	Released	1	70	1.0	EA (Roller	0.2 g	0.0 g
🗆 🏟 40768	C Part	Released	1	80	1.0	EA (Plunger Spring	0.0 g	0.0 g

Complete CBOM information using Edit command

Select icon Edit, open menu Action (about commands description, see EBOM in chapter "Part Categories")



Select icon Customize, open menu Table View (about table description, see EBOM in Part Categories section)

Version	5	Date:	12-Dec-2016	
Status	Template			130

💽 🕄 - 📰 🖓	(
* Create New Table View	
All Info	Γ.
CMS Info	
Costs Info	
Electronic Component View	
Engineering	1
Info 1: Description and Make-Buy	1
Info 2: Weights	Ľ.,
Info 3: Carry Over and Similar Parts	1
Info 4: Remarks	1
Info 5: Raw Materials Info	1
Packaging Info	1
Techs Info	

Version	5	Date:	12-Dec-2016	
Status	Template			131

Import CBOM from ECAD

ECAD user has to prepare an Excel file (usually created using ECAD functionality) containing information related to components and numbering, in a PCB project. The Excel file contains information like part number, estimated costs, reference and quantity (below an example).

	A	В	C	D	E	F	G	Н
1	Schematic Ref. No.	Components Des.	Package	Supplier	Part No.	Quantity	Unit Cost	Total Cost
2							Euro	Euro
3	PCB	PCB FR4 1.6mm				1	0,3000	0,3000
4	D1-D4,D5	BAS21				5	0,0200	0,1000
5	LED	Color to CIE 1931	Mini- Topled	Osram	LCB M67S K1M1 7J8K	1	0,1100	0,1100
6	R3,R4	Resistors, 1k, 5%	1206			3	0,0020	0,0060
7	C1-C4	Capacitors 10nF	603			4	0,0030	0,0120
8	Sw1+Sw2 / Sw3+Sw4	Switch		Alps	SPVQ910201	2	0,6000	1,2000
9	LED for flood lighting					2	0,1100	0,2200
10	Resistors for flood lighting - R5,6					3	0,0020	0,0060
11	Connector - 8 pin, soldered to PCB -	as per PCB 16128				1	0,1000	0,1000
12								0,0000
13								0,0000
14								0,0000
15								0,0000
16							ICT	0,0880
17							PTH	
18							SMT	0,1760
19							Other	0,1159
20							Sub-total	2,4339
21							Total	2,6286
22								
23								
24								
25	Notes:							
26	Added components over initial P	CB RFQ						
27								
28								
29								

Step 1 Select command Variants

RFQ000005-01	È 🔳 - 🖉 🛄 - 🖪 -	+	2 🏹 🧮 🔆 -
Folders	□ Name ▲	Rev Type	Description
Sales Options	000000552	A Sket	Switch Window lifter
Estimated Volumes	000000553	A Sket	Switch Color white
Lifecycle	000000554	A Sket	Switch color black
Members			

Version	5	Date:	12-Dec-2016	
Status	Template			132

Step 2 For each variant, select part number from table and select command Bill of Material

000000552 A	^	EBOM	EBOM Common	ME	BOM F	lant Spe	cif	Wher	e Used	Marki	ups	
Bill Of Materials		Re Re	eports 🗸 🖉 🛓] _	: 1		8		3D Mai	rkup 👻	×7 04	»
Access		Nama		M	SAP.	Tuna	Ctoto	Dev	E/N	0.54	II of M	Descript
Equivalents					E .	Type 🔺	State	Rev	F/N	ury	U OI M	Descript
Change Management		🖥	000000552			Sket	Peer	Α			PCS	Switch V
Specs & Documents			000000555			Sket	Peer	А	1	1.0	PCS	Index
Related Parts			000000556			Sket	Peer	А	2	2.0	PCS	Button
Collaboration			000000557			Sket	Peer	Α	3	1.0	PCS	PCB
Multiple Ownership Access			000000558			Sket	Peer	A	4	1.0	PCS	Spring
Manufacturing Details												

Step 3 From EBOM, select part recognized as PCB

If necessary, user can create a new part, if Product Design Engineer doesn't create previously the part

000000552 A	EBOM EBOM Common	M	BOM F	lant S	pecif Whe	ere Used	Markups	;			
Bill Of Materials	📃 - Reports - 🖉 🛓	ו	: 1	 ✓ 	😢 🖪 💷	Markup 🗸	-	Chang	ie • 🗔 😹		🗔 - 📰 - 🜉
Change Management		,				04-4-			04		
Specs & Documents	Name	4	É		туре	State	Rev	F/N	Qty	U OT M	Description
Related Parts	000000552				Sketch Part	Create	Α			PCS - PIEC	Switch Window lifte
Collaboration	000000555				Sketch Part	Complete	Α	1	1.0	PCS - PIEC	Index
Manufacturing Details	O00000556 O				Sketch Part	Complete	Α	2	2.0	PCS - PIEC	Button
Vendor Part Numbers	000000557				Sketch Part	Complete	Α	3	1.0	PCS - PIECL	РСВ
CMS Information					Sketch Part	Complete	A	4	1.0	PCS - PIEC	Spring
Tool Parts											
Referenced By											

Version	5	Date:	12-Dec-2016	
Status	Template			133

Step 5 Classify the part as PCB

About how to classify a part, see chapter "Classify" in "Part Categories".

The purpose is to add to PCB part attributes with factors used to retrieve the estimated cost.

000000557 A	Classification BO						× ۳
Bill Of Materials			2	💎 😪 🔳 %	-		
Change Management		ion Deli	Dent				Def Dee
Specs & Documents	Name 🔺	ion Polic	y Parti	amily Classification	Attributes	ľ	N Rer Des
Related Parts				Estimated Co Estimated Co	st Factor ICT = 0 st Factor SMT = (0.004	
Collaboration	000000557	Ske	tc PCB	Estimated Co Estimated Co	Estimated Cost Factor PTH = 0.004		
Manufacturing Details				View Details			
Vendor Part Numbers							
CMS Information	< >	<					>
Tool Parts							1 obiect
Referenced By	Classification						× *
Classification PowerView	📃 - 📮 🛄 - 🖪 - 🛽		7	🚱 🧮 🔆 •			
Issues	Name 🔺	Туре	Title	Description	State	Owner	Classification Pa
	PCB	Part F	PCB	PCB	Active	Test E	Technical Classi

Step 6 From toolbar in command Bill Of Material, select commands to import EBOM

·	Modified : Feb 8, 2016	Modified : Feb 8, 2016 11:45:11 PM									
000000557 A	EBOM EBOM Common	MBOM Plant Specif Where Used Markups									
Bill Of Materials	📃 - Reports - 🥒 👔	🛯 🚅 🏦 🕷 🖬 💷 🚳 Markup - 🔄 🙈 🖥									
Change Management											
Specs & Documents		4 🛍 🛅 🕅 ECAD: Create BOM from Excel file									
Related Parts	000000557	Sket Co A									
Collaboration											

Version	5	Date:	12-Dec-2016	
Status	Template			134

Step 7 Select file from local directory



CBOM is updated with components contained in Excel file.

000000557 A	EBOM EBOM Common	MBC	OM Pla	nt Specif.	Whe	re Used	Mai	kups			
Bill Of Materials	📃 - Reports - 🖉 🛃	1	1	* 🖲	30	Mark	Jp 👻 🕑	44	Char	nge • » 📴 • 📰 • »	
Change Management				. T		Devi	E AL	-			Dee
Specs & Documents		4 (í í	S Type	State	Rev	F/N	Qty	U OT M	Description	Des
Related Parts	000000557			Sket	Com	A			PCS	PCB	De:
Collaboration	🖃 🔄 🐜 000007411			Sket	Create	А	10	1.0	PCS	PCB FR4 1.6mm	De:
Manufacturing Details	🖃 🔲 🐚 000007422			Sket	Create	А	20	1.0	PCS	BAS21	De:
Vendor Part Numbers	🖃 🛄 🐜 0000000153			EC.	Publ	00	30	1.0	PCS	Color to CIE 1931	De
CMS Information	🖃 🗌 🐚 000007433			Sket	Create	А	40	2.0	PCS	Resistors, 1k, 5%	De:
Tool Parts	🖃 🔄 🐚 000007444			Sket	Create	Α	50	0.0	PCS	Capacitors 10nF	De
Referenced By	🕀 🖂 🐜 0000000156			EC .	Publ	01	60	2.0	PCS	Switch	Pur
Classification PowerView	🖃 🔄 🐜 000007455			Sket	Create	А	70	2.0	PCS	Resistors, 1k, 5%	De:
Issues											

The estimated cost of PCB component is retrieved using costs information and factor values

Properties M	aterial Parts Lifecycle	Where Used Revi	sions History II
🖉 米 🔊 🖣	🛯 🍫 💷 😐 🗔 🚱	**	
Name	000000557	Revision	A Sta
Originator	Matthew Spiteri	Originated	Nov 26, 2015 Mo
Part Classification	-	Quality Release	
Description	PCB		
Design Purchase	Design	Long Lead Time Component	FALSE
End Item	Yes	CMS Part Status	
Technical			
Net Weight	0.0	Gross Weight	0.0 Ne
Carry Over Parts		Reparks	
Similar Parts		Estimated Cost	4.468932 Euro

Version	5	Date:	12-Dec-2016	
Status	Template			135

Update Estimated Costs

User can enter estimated cost for sub-component, using Bill Of Material functions or updating the part details.

- Bill Of Material can be viewed with several tables, select table Costs Info or Electronic Component View

0000000557 A	EBOM EBOM Common	MBOM F	lant Speci	
Bill Of Materials	📃 - Reports - 🥒 👔	L 1 1	* 🖲	E
Change Management	Name		📇 Тур	ir
Specs & Documents			Ske	
Related Parts	□ □ ≥ 000007411		Ski	:5
Collaboration	□ • 000007422		Ski	1
Vender Part Numbers			FC	E
venuor Farthumbers			20	C C

Using the mode Edit, user can update component information, like estimated costs

	EBOM	EBOM Common	I	MBOM Pla	ant Specif V	Vhere Used M	larkups			
-	-	Reports -		¢ 7	* 🖲 🔳	🙃 Markup 🗸 🗌	🤊 🖄 📊 Change 🗸 🗌	- 🛃 » 目	o - 📰	• 💽 »
	Name)		Ref Des	DesignPurchase	Component Type	Manufacturer Part Number	Manufacturer	Package	Estimated Cost
=		000000557			Design					4.468932 Euro
		능 000007411	1.0	PCB	Design					0.5 Euro
		₩ 000007422	1.0	D5	Design					0.02 Euro
		ᠳ 0000000153	1.0	LED	Design		LCB M67S K1M1 7J8K	Osram	Minit	0.33 Euro
		₩ 000007433	2.0	R3,R4	Design				1206	0.002 Euro
		€ 000007444	0.0	C1-C4	Design				603	0.003 Euro
	+	∖⇔ 0000000156	2.0	Sw1	Purchase		SPVQ910201	Alps		1.638 Euro
		₩ 000007455	2.0	R1, R2	Design				1206	0.002 Euro

- Part details form contains the field Estimated Cost: the user can select icon Edit and update value

000007455 A	^ Properties	Lifecycle V	Vhere Used R	evisions	History	>>		
Bill Of Materials		<u>h</u> 🎭 💿 I	Image:	⅔-				
Change Management				• 6.				
Specs & Documents	AEQ		AEQ Description					
Related Parts	Technical							
Collaboration					Net			
Manufacturing Details	Net Weight	0.0	Gross Weight		Weight UOM			
Vendor Part Numbers	Carry Over		Remarks					
CMS Information	1 arts		Estimated					
Tool Parts	Similar Parts		Cost	0.002 Et	0.002 Euro			
Referenced By								
Version	5	Date:		12-Dec	-2016			
Status	Template					136		

In order to update the estimated cost of assembly PCB or update the estimated cost for variants, user has to select command "Update Estimated Cost"

L	Modified : Apr 1, 2016	10:19:07 AM	
000000557 A	EBOM EBOM Common	MBOM Plant Specif	Where Used
Bill Of Materials	📃 - Reports - 🥒 📓	L 1 * 0 🗖	3D Markup
Change Management			
Specs & Documents	Name	Ref Des DesignPurchas	se Component
Deleted Dede	🔲 🖃 🥅 🖬 000000557	Design	

The Estimated Cost of EBOM is updated.

	EBOM EBOM Common		MBOM Pla	ant Specif V	/here Used M	larkups			
-	🛛 - Reports - 🖉 🛓		¢ 7	* 🖲 🔳	🕫 Markup 🗸 🗌	🤊 🕅 📊 Change 🗸	🗔 🏭 » 🖡	• - 📰	• 💽 »
	Name		Ref Des	DesignPurchase	Component Type	Manufacturer Part Numbe	r Manufacturer	Package	Estimated Cost
-	000000557			Design				(4.702536 Euro
	🖃 🔄 🍋 000007411	1.0	PCB	Design					0.5 Euro
	🖃 🔄 🍋 000007422	1.0	D5	Design					0.02 Euro
	🖃 🛄 🐚 000000153	1.0	LED	Design		LCB M67S K1M1 7J8K	Osram	Minit	0.33 Euro
	🖃 🛄 🐚 000007433	2.0	R3,R4	Design				1206	0.002 Euro
	🖃 🛄 🐚 000007444).0	C1-C4	Design				603	0.003 Euro
		2.0	Sw1	Purchase		SPVQ910201	Alps		1.638 Euro
	- 🗌 🐚 000007455	2.0	R1, R2	Design				1206	0.005 Euro

The command updates only 1 level of EBOM; it means, if EBOM is composed by several levels, user has to update estimated costs starting from the lower level.

The command is available also to EC Part in state Preliminary.

Version	5	Date:	12-Dec-2016	
Status	Template			137

Compare and Copy CBOM

Design Engineers can compare different variants and copy a selection of components from one CBOM to another.

The command is available also in menu Reports, contained in Bill Of Material toolbar, in order to compare two EBOM.

Compare two different variants

Step 1 Select command Variants

RFQ000005-01	🔳 - 🖉 🛄 - 🗔 - 🖪	+	2 🟹 🧮 🔆 -
Folders	□ Name ▲	Rev Type	Description
Variants Sales Options	000000552	A Sket	Switch Window lifter
Estimated Volumes	000000553	A Sket	Switch Color white
Lifecycle	000000554	A Sket	Switch color black
Members			

Step 2 Select two variants and select command BOM Compare Report

🔳 · 🖉 🛄 - 📑 - 🚺	. -		🖸 🟹 🧮 🔆 -		
Add Products	Rev	Туре	Description		
Add Variants	А	Sket	Switch Window lifter		
B ROM Compare Deport	А	Sket	Switch Color white		
	А	Sket	Switch color black		

Version	5	Date:	12-Dec-2016	
Status	Template			138

<u>Step 3</u> <u>Select command Apply; from one CBOM, select components to be copied to second CBOM using the</u> <u>dedicate icons</u>

	Report												
Revision			13			r ormat		actured rec	Por Oc	onsonaaco	аторон		
							V P	art Name	Rev	vision	🗌 Ту	pe	
							🗌 Fi	nd Numbe	r 🗌 Ref	erence De	signator 🗌 Co	mponent Locat	tion
Revision Options	As Stored 🗸		As Sto	red 🗸		Report Differences By	V Q	ty	🗌 Uni	t of Measu	ire Su	ibstitute For	
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	Apply Reset												
Complete Su	Immary Difference Only R	Com	mon Com	ponents	. Unique to	Left Re Unique to	Right R						R _N
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\bigcirc												Save Re	eset
	Part Name Rev	Туре	F/N	Ref Des	Component L	De Part Name	Rev	Туре	F/N	Ref Des	Component L	. Description	State
	■ ■ 000000552 A	Part		-	·	■ 000000554	А	Part					Creat
	🖃 🔲 👪 0000005£ A	Part	1										
						nc 19000000555	A	Part	1			Index	Peer.
	🖃 🗔 👪 0000005£ A	Part	2			BL =0000000556	A	Part	1			Index Button	Peer. Peer.
	 □ ■ 0000005£ A □ ■ ■ 00000005£ A 	Part Part	2 3			Bit 0000000556 0000000557 	A A A	Part Part Part	1 2 3			Index Button PCB	Peer. Peer. Peer.
	 □ ■ □ ■ 00000005€ A □ □ ■ 00000005€ A □ □ ■ 00000005€ A 	Part Part Part	2 3 4			at	A A A	Part Part Part Part	1 2 3 4			Index Button PCB Spring	Peer. Peer. Peer. Peer.
DEL	 □ ■ □ ■ 00000005£ A □ □ ■ 00000005£ A □ ■ □ ■ 00000005£ A 	Part Part Part	2 3 4		, , , , ,	Image: Constraint and Constraintand And Constraint and Constraint and Constraint and Co	A A A A OOA	Part Part Part Part Part	1 2 3 4 5			Index Button PCB Spring HOUSING	Peer. Peer. Peer. Peer. Rele
DEL		Part Part Part	2 3 4			Regotionoutoutouses Regotionoutoutouses Regotionoutoutouses Regotionoutouses Regotionoutouses Regotionoutouses	A A A A 00A 00A	Part Part Part Part Part Part	1 2 3 4 5 6			Index Button PCB Spring HOUSING HOUSING	Peer. Peer. Peer. Peer. Rele Rele

Step 4 Complete second CBOM with new or existing components

	EBOM EBOM Common MBOM Plant Specif Where Used Markups						arkups			
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	Name	Туре	State	Rev	F/N	Qty	U of M	Description	Weight	Part Weight Gross / (
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		Sket	Create	А	10	1.0	EA (Housing	0.0 g	
	🗆 🌼 000000057	Sket	Create	А	20	1.0	EA (Indexing	0.0 g	
		Sket	Create	А	30	1.0	EA (Toggle	0.0 g	
	🗆 🌼 000000059	Sket	Create	А	40	1.0	EA (Socket	0.0 g	
	🗆 🌼 000000060	Sket	Create	А	50	1.0	EA (Slider	0.0 g	
	 	EC	Preli	1	60	1.0	EA (PCB	1.5 g	
	🗆 🌼 30608	EC	Rele	1	70	1.0	EA (Roller	0.2 g	
	40768	EC	Rele	1	80	1.0	EA (Plunger Spring	0.0 g	

Version	5	Date:	12-Dec-2016	
Status	Template			139

Compare two different BOMs

The function is able to compare both CBOMs and EBOMs.

Design Engineer has to search a part, related to Bill Of Material to be compared (see previous point for different functions used to search for part).

Step 1 Select command Bill Of Material, select menu Reports and select command BOM Compare Report



The system opens a new window with part selected.

BOM Cor	mpare Report								
Compa	are Criteria							R N	^
Q. %	2-								
	Fleids in red italics are n	required						^	
Гуре	EBOM 🗸		EBOM 🗸	Match Based On	Find Number		~		
Part Name 🤇	000000552		ear	Clear Expand Level	1				
Revision	В			Format	●Structured Report ○Con	isolidated Repo	ort		
Revision Options	As Stored V		As Stored V	Report Difference: By	Part Name Revisi Find Number Refere Outy Usage Make Select All	ion ence Designato f Measure Buy	Type Component Locati Substitute For S Type	on	
Comple	ete Summary	Difference Only F	R Common Components	Unique to Left R	e Unique to Right R		Apply	> et	
			Click on Ap	pply to generate resu	lts				
'ersio	n		5	Da	te:	1	L2-Dec-2016		

Version	5	Date:	12-Dec-2016	
Status	Template			140

Step 2 The user has to search for another part (it can be Sketch or EC part)

Search Refinement	Search Results	1 - 27 of aj	oprox. 27 Res	ults Pa	ge Size:	50) (Max Value: 100	0) ii	114
453050	E Q- 💁	-	. - 🗾 [= 🛠	-			
▼ Taxonomies	Name 🔺		•	Policy	State	Description	Rev	1
▼ Types	2744			Tool	Preli	LAB JIG - 453050		^
□ ■ Part(23888)	2832			Tool	Preli	MOULD - 453050		
Vendor Part Number(7 Hardware Part(1126) Manufacturing Bott/75	2833			Tool	Preli	MOULD - 453050		
Libraries	3.453050			EC	Publ	BRAKE DUAL CCT 2.5MM	00	
⊞ □ Technical Classification(2)	O 👪 4511			Tool	Preli	ASSY-453050(CAR37/O		
 Attributes 	E <u>453050</u>			EC	Publ	BRAKE DUAL CCT 2.5MM	00	
Name	4726			Tool	Preli	ASSY-453050(CAR37/O		
Originated	4727			Tool	Preli	ASSY-453050(CAR37/O		~
Vilgiliateu	<	>	<				`	
< Nodified >							Submi	it

Step 3 Select command Apply to see differences

User can use icon to sync to left or sync to right, in order to update BOMs.

Comple	ete Summary Diff	erence (Only R	Com	mon Com	ponents	Unique to Let	ft Re.	Unique to Right R	ł						R.M.
(R_ 🗠	📰 - 🔜 🔆	-													\sim	
\sim															Save	leset
Diff Code	Part Name 🔺	Rev	Туре	F/N	Ref Des	Component L	Description	Sta	Part Name	Rev	Туре	F/N	Ref Des	Component L	Description	State 0
	0000000552	В	Part					Cr	453050	00	Part					Publ ^
REP, REVATT	= 🗖 📑 000000	05 A	Part	1			Index	Cc	₿52823-09	00	Part	1			HOUSING	Publ
REP, REV ATT, QTY ATT	- 🗆 💀 000000) ⁵ A	Part	2			Button	Cc	₽ 52821-01	00	Part	2			COUPLE	Publ
REP, REVATT	= 🗖 📑 000000	²⁵ A	Part	3			PCB	Cc	₽ 52820-01	00	Part	3			CAM - BR	Publ
REP, REVATT	= 🗖 📑 000000	DE A	Part	4			Spring	Cc	₿ 52824-04	00	Part	4			SOCKET	Publ
DEL									52819-02	00	Part	5			PLUNGE	Publ
DEL									6 3555-03	00	Part	6			CONTACT	Publ
											- ·	-				- ···

The Compare table content depends on fields Match Based On, Expand Level and Format:

Part Name	¥
Part Name	
Find Number	
Reference Designator	
Part Name + Reference Designator	
Part Name + Reference Designator + Class Code	

Match Based On:

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Status	Template			141

If "Match Based On" value is "Find Number", the table shows components with same Find Number on same rows; in this case, the commands Sync are used to copy attribute values

In the example, the information of part 0000000555 is updated using the information of part 52823-09

Comple	ete Summary Differ	rence (Only R	Com	imon Com	iponents	Unique to Lef	ft Re.	Unique to Right	R						
\sim	Save Reset															
Diff Code	Part Name 🔹	Rev	Туре	F/N	Ref Des	Component L	Description	Sta	Part Name	Rev	Туре	F/N	Ref Des	Component L	Description	State
	🖃 👪 000000552	В	Part					Cr	B 453050	00	Part					Publ
REP, REVATT		A	Part	1			HOUSING	Ρι	₽ <u>52823-09</u>	00	Part	1			HOUSING	Publ
REP, REV ATT,	- 🗖 🗟 0000003	A	Part	2			Button	Сс	₿52821-01	00	Part	2			COUPLE	Publ

If "Match Based On" value is "Part Name", the table shows components with same Part Number on same rows; in this case, the commands Sync are used to copy parts from one BOM to the other.

In the example, the information of part 0000000555 is updated using the information of part 52823-09

Comple	ete Summary Differ	ence C	nly R	Com	non Com	ponents	Unique to Lef	t Re.	Unique to Right R						
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$\mathbf{\nabla}^{-}$															
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ADD	🖃 🔲 👪 0000005	А	Part	2			Button	Сс							
ADD	🖃 🔲 👪 0000005	А	Part	3			PCB	Сс							
ADD	🖃 🛄 👪 0000005	А	Part	4			Spring	Сс							
DEL	<u>52581-01</u>	00	Part	15			PLUG	Рι	<u>≣52581-01</u>	00	Part	15			PLUG
DEL									ELE2040.02	00	Port	5			

Version	5	Date:	12-Dec-2016	
Status	Template			142

CBOM approval

Design Engineer, starting from RFQ package or starting from a query, can approve CBOMs

User has to search Sketch Part Number, related to CBOM.

PLM provides several functionalities to search parts, like:

- starting from RFQ package, users can select variants tab and select Sketch Part
- users can search by part number

Step 1.1 Version with RFQ Package: select command Variants and select Sketch part



Step 1.2 Version with search: enter Sketch part number in Navigator textbox



User has to select part number

Search Refinement			Search Results									
Search 0000*552		QØ	E × 🔍 • •	þ		P 🖉 🏾	⅔-					
Case Sensitive	Limit to 100 results		🔄 Display Name 🔺		Revision	Туре	Policy	Description	State	Modified	Originated	0
Туре	Ø	^	000000552		A	Part	Developmen	Switch Window lifter	Create	Jan 13, 2016	Nov 26, 201	ł
Revision												

Version	5	Date:	12-Dec-2016	
Status	Template			143

	-										
	000000552 A	EBOM EBOM Common	MBO	M Pla	nt Specif Wher	e Used Markups					
	Bill Of Materials	📃 - Reports - 🖉 🛃	L L	1	🗹 📵 🔲 💁	🛐 Markup 🗸 🌍	44	Change -	- 💽 - 🚝 🕹	1 🗛 - 🛄 - 🗏	•
	Access			h T	vpe	State	Rev	F/N	Qtv	UofM	Description
	Equivalents			а Г.	100 -	otato			ony	o or m	booonpaon
	Change Management	000000552		5	Sketch Part	Create	A			PCS - PIECES	Switch Wind
	Specs & Documents	🖃 🔲 🔜 000000555		5	Sketch Part	Create	А	1	1.0	PCS - PIECES	Index
	Related Parts			5	Sketch Part	Create	Α	2	2.0	PCS - PIECES	Button
	Collaboration			S	Sketch Part	Create	Α	3	1.0	PCS - PIECES	PCB
•	Multiple Ownership Access	□ 🔲 👪 0000000558		s	Sketch Part	Create	A	4	1.0	PCS - PIECES	Spring
	Manufacturing Details										

🬷 📲 🏹

ow lifter

Step 2 Select Sketch part number and select command Bill of Material

Step 3 Approve Sketch parts

Use icon "BOM Go To Approval" to approve Sketch parts (icon contained in toolbar)

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000000552 A	EBOM EBOM Common	ME	BOM P	lan <u>t S</u>	pecif	Wher	e Used
Bill Of Materials	📃 - Reports - 🖉 🛃] 🗈 🎞 🔽 💽				🖪 💿 Markup	
Change Management							
Specs & Documents	Name		١ ١		туре		
	□ □ 🖬 000000552				Okatab I	lot	
Sketch parts have a lifec	ycle composed by 4 states:						



Design Engineer can promote Sketch parts from state Create to state Peer Review; Senior Design Engineer can promote Sketch parts from state Peer Review to state Complete.

After selecting for the first time the icon BOM Go To Approval, all Sketch parts in state Create are moved to state Peer Review; the function is available to Design Engineer and also to Senior Design Engineer.

Version	5	Date:	12-Dec-2016				
Status	Template			144			
EBOM	EBOM Common	MB		lant Specif When	e Used Markups		
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Name			:	Туре 🔺	State	Rev	F/N
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	000000555			Sketch Part	Peer Review	Α	1
	000000556			Sketch Part	Peer Review	А	2
	000000557			Sketch Part	Peer Review	А	3
	000000558			Sketch Part	Peer Review	А	4

After selecting for the second time the icon BOM Go To Approval, all Sketch parts in state Peer Review are moved to state Complete; the function is available only to Senior Design Engineer.

EBOM EBOM Common	MB	SOM P	lant Specif When	re Used Markups		
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Name		:	Туре 🔺	State	Rev	F/N
■ □ ➡ 000000552			Sketch Part	Complete	Α	
			Sketch Part	Complete	А	1
□ □ ➡ 000000556			Sketch Part	Complete	А	2
□ □ ➡ 000000557			Sketch Part	Complete	А	3
			Sketch Part	Complete	A	4

The command performs a massive approval: all sub-components, that are in the same state of top assembly part, are promoted.

Version	5	Date:	12-Dec-2016	
Status	Template			145

Before promote

EBOM EBOM Common	ME	BOM P	lant S	pecif Wh	ere Used 🔰 I	Markups	1
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Name	4		:	Туре	State	Rev	F/N
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□ □ ➡ 000000555				Sketch Part	Comprete	А	1
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- 🗌 🔚 000000557				Sketch Part	Peer Review	A	3
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After promote

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Name	4	ß		Туре	State	Rev	F/N
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⊡ 🔲 👪 000000555				Sketch Part	Complete	А	1
⊟ 🔲 🌇 000000556				Sketch Part	Complete	А	2
🖃 🔲 👪 000000557				Sketch Part	Complete	Α	3
🖃 🛄 🐂 000007411				Sketch Part	Complete	A	10
- 🗌 🐚 000007422				Sketch Part	Complete	А	20

Version	5	Date:	12-Dec-2016	
Status	Template			146

CBOM revision

During RFQ maintenance and revision, CBOMs can be revised; Design Engineer, starting from RFQ package, can revise CBOMs.

User has to search Sketch Part Number, related to CBOM to be revised (see previous point for different functions used to search for CBOM)

Step 1 Revise Sketch parts

User has to select command Revision

C	Modif	fied : Apr 1, 20	016 11:21:14	AM			
000000552 A	Properties Material	Parts L	ifecycle	Where Used	Revisions	History	Ima
Bill Of Materials	🕢 🖉 🗔 🖪 - [-	7 😪	≣ ⅔-	\sim		
Change Management			v 😀			_	
Specs & Documents	Name 🔺	Rev	State			Туре	
Related Parts	000000552	A	Complete			Sketch Part	
Collaboration							
Manufacturing Details							

Step 2 Select command Create Revision

User has to select command Revision; the system opens a new window with new revision

5 A 6	
Fleids in red italics are required	^
Type Part	
Part Name 0000000552	
Policy Sketch Part	
Custom Revision Level	
Basic	
Revision Comments	~
<	
Done Cancel	

Version	5	Date:	12-Dec-2016	
Status	Template			147

The new revision is created

Properties N	laterial Parts	5 l	lifecycle	Where Used	Revisions	History	Images	Route	
* 🖉 🗔 🗄	• - 📰-	V	7 😫	▦ і‰-					
Name 🔺		Rev	State			Туре			Revision Comments
000000552		А	Complete			Sketch Part			
000000552		В	Create			Sketch Part			New version CBOM for RFQ revision

The RFQ contains the new Sketch part revision

RFQ000005-01	🔳 · 🖉 🛄 - 📑 - 📑	-	, 🖉 🖗	' 🗐 🔆 -
Folders	Name 🔺	Rev	Туре	Description
Variants				
Estimated Volumes	000000552	В	Sketch P	Switch Window lifter
Lifecycle	000000553	А	Sketch P	Switch Color white
Members	000000554	А	Sketch P	Switch color black
Activities Estimation				

Version	5	Date:	12-Dec-2016	
Status	Template			148

CBOM to EBOM upgrade

Purpose	RFQ package contains CBOMs, related to variants belongs to RFQ.	Status	D	efine
	RFQ is accepted by Customer; CBOMs can be used to create EBOMs			
Stakeholders	Design Engineers			
Beginning	Design Engineer searches for CBOM to upgrade			
Interactions	Design Engineer, starting from RFQ package, can update CBOMs in	EBOMs;	each	CBOM is
	translated from Sketch Part to definitive Part, like sub-components			
End	EBOMs are created with same contents of CBOMs			
Constraints	None			

When RFQ is accepted by Customer, CBOMs can be used to create EBOMs. All sub-components contained in CBOMs are translated from Sketch Part to EC Part.

User has to search Sketch Part Number, related to CBOM to be translated in EC Part (see previous points for different functions used to search for CBOM)

Step 1 Upgrade Sketch parts to Engineering parts

When Sketch part state is Complete, the toolbar contained in Bill of Material contain the icon "BOM Go To Development", in order to change part type from Sketch to Engineering Part (EC Part)

		1					
0000000552 B	EBOM	EBOM Common	ME	BOM P	lant s	pecif W	/here Used
Bill Of Materials	- R	eports 🗸 🖉 🛓	ם	: 1	*		30 Markur
Change Management						Time	Ctata
Specs & Documents	Name			١ ا		туре	State
Related Parts	5	000000552				Sketch Part	Complete

BOM Go to Development will create the Engineering BOM corresponding to the Concept BOM. Do you wa	int to continue?
	Cancel

After confirm, the system creates a new part revision 00, for all Sketch parts contained in CBOM.

Version	5	Date:	12-Dec-2016	
Status	Template			149

Ste	p 2	Search	part from N	Vavigato	r textbox	or user	command	Revision in	part details form
_				_					

IENCE ENOVIA Engin	neering BOM Mana 🛛 🕅	000*00552		ø Q 💊	
Se	earch Results		1-	50 of approx. 66 Results P	age Size:
00	E Q - × 🔍 - 💌 -	• • • • •	· 📃 🗐 🕺	A	
^ 🗆	Display Name 🔺	Revision 🕋	Type Policy	Description	State
] 👪 000000552	A	Part Dev	Switch Window lifter	Co
	000000552	00	Part EC	Switch Window lifter	Preli
	000000552	В	Part Dev	Switch Window lifter	Co
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0000000552 B	Properties Material Pa	arts Lifecycle	Where Used	Revisions History	Images
Bill Of Materials	* 🖉 📮 🗔 - 📴	I- 🔜 🖓 🔮	2 🔳 🔆 -		
Change Management	Name	Dou: State		Turne	
Specs & Documents	Name 🔺	Rev State		Туре	
Related Parts	000000552	A Comple	ete	Sketch Pa	rt
Collaboration	000000552	B Comple	ete	Sketch Par	rt
Manufacturing Details	000000552	00 Prelimi	nary	EC Part	
Vendor Part Numbers					

Select part type "Engineering Part" and select command Bill of Material: all Sketch parts are updated in Engineering Part, using same part number.

000000552 00	EBOM	EBOM Common	MBC	M Pla	ant S	pecif V	Where Used	Markups	1		
Bill Of Materials	- R	eports 🗸 🖉 🛓	L	1	 	😢 🔳	30 Markup -	5 A	Chang	ge 🗸 🗔 🗸	- 🔍 -
Change Management				-				- David	E 41	04	
Specs & Documents	Name		4			туре	State	Rev	F/N	Qty	UOTM
Related Parts	= 🗆 👪	000000552				EC Part	Preliminary	00			PCS - PIEC.
Collaboration		000000555				EC Part	Preliminary	00	1	1.0	PCS - PIEC.
Manufacturing Details		000000556				EC Part	Preliminary	00	2	2.0	PCS - PIEC.
Vendor Part Numbers		000000557				EC Part	Preliminary	00	3	1.0	PCS - PIEC.
CMS Information) 👆 000007411				EC Part	Preliminary	00	10	1.0	PCS - PIEC.
Tool Parts) 👆 000007422				EC Part	Preliminary	00	20	1.0	PCS - PIEC.
Referenced By) 🐜 0000000153				EC Part	Publish	00	30	1.0	PCS - PIEC.
Classification PowerView) 👆 000007433				EC Part	Preliminary	00	40	2.0	PCS - PIEC.
Issues		1 🍆 000007444				FC Part	Preliminary	00	50	0.0	PCS - PIEC

Version	5	Date:	12-Dec-2016	
Status	Template			150

ENG07 EBOM management

Purpose	Design Engineers define EBOMs related to new variants or updates	Status Define
	EBOMs related to existing variants	
Stakeholders	Design Engineers	
Beginning	Create or search for existing parts in order to update EBOMs	
Interactions	Design Engineers have to complete EBOMs definition.	
	Design Engineers can add new or existing parts, completes Technic	cal information, compare
	EBOMs, approve EBOMs	
End	EBOMs are completed	
Constraints		

About EBOM creation and update, see chapter "EBOM" in "Part Categories".

Version	5	Date:	12-Dec-2016	
Status	Template			151

Update EBOM from ECAD

EBOM usually contains a portion related to electronic components; Electronic Engineer can define Electronic Components contained in this portion using functionalities described in chapter "EBOM" in "Part Categories", for example using the command "Add Electronic Components".

Another option is to define the electronics components using the information contained in a file, uploaded by Electronic Engineer in ECAD document (see chapter "ECAD documents management").

ECADs are able to create an Excel file containing information related to components and numbering, in a PCB project. Electronic Engineer has to create an ECAD document connected to part (see chapter "ECAD documents management") and upload all files related to PCB project. One of these files is an Excel file that contains the Electronic Components.

The function "Create EBOM from Ref Doc" reads the information contained in Excel file and update the EBOM. The Excel file contains information like part number, estimated costs, reference and quantity (below an example).

	A	В	С	D	E	F	G	Н
1	Schematic Ref. No.	Components Des.	Package	Supplier	Part No.	Quantity	Unit Cost	Total Cost
2							Euro	Euro
3	PCB	PCB FR4 1.6mm				1	0,3000	0,3000
4	D1-D4,D5	BAS21				5	0,0200	0,1000
5	LED	Color to CIE 1931	Mini- Topled	Osram	LCB M67S K1M1 7J8K	1	0,1100	0,1100
6	R3,R4	Resistors, 1k, 5%	1206			3	0,0020	0,0060
7	C1-C4	Capacitors 10nF	603			4	0,0030	0,0120
8	Sw1+Sw2 / Sw3+Sw4	Switch		Alps	SPVQ910201	2	0,6000	1,2000
9	LED for flood lighting					2	0,1100	0,2200
10	Resistors for flood lighting - R5,6					3	0,0020	0,0060
11	Connector - 8 pin, soldered to PCB -	as per PCB 16128				1	0,1000	0,1000
12								0,0000
13								0,0000
14								0,0000
15								0,0000
16							ICT	0,0880
17							PTH	
18							SMT	0,1760
19							Other	0,1159
20							Sub-total	2,4339
21							Total	2,6286
22								
23								
24								
25	Notes:							
26	Added components over initial P	CB RFQ						
27								
28								
29								

The user has to search for the top-assembly component related to Electronic Components (the PCB component)

From toolbar in command Bill Of Material, select commands to Create EBOM from Ref Doc

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Status	Template			152

here Bart (00)	Owner : matthew.spite Modified : Apr 1, 2016	eri 11:56:1	7 AM					
000000557 00	EBOM EBOM Common	ME	SOM P	lant S	Spe <u>cif</u> .	Whe	re Use	d
Bill Of Materials	📃 - Reports -	l C	: 1			3 D	Mark	cup -
Change Management		, ,		_	$\mathbf{\nabla}$			
Specs & Documents	Name	4	É		Туре	State	Rev	F/I
Related Parts	□ □ ➡ 000000557				EC	Preli	00	
Collaboration	🖃 🔄 🐚 000007411				EC	Preli	00	1(
Manufacturing Details	🖃 🔲 🐚 000007422				EC	Preli	00	20
Vendor Part Numbers					FC	Publ	00	3(

The icon is equals to command "Import CBOM from ECAD"; the difference is that during CBOM management the user has to browse the file, whereas during EBOM management the file has to be uploaded as attachment in ECAD document connected to part.

If ECAD document is missing or there is an ECAD document connected to part without an Excel file with format "bom", the system pop ups an alert and the EBOM is not updated.

Document with ECAD EBOM missing
ок

If ECAD document is connected to part and an Excel file with format "bom" is contained, the Excel file is read in order to find Electronic components information. If it's not possible recognize the Electronic components contained in Excel file (for example, a row without the Manufacturer Part Number), the EBOM is not updated and the system shows the error message

System Error: #5000001: java.lang.Exception: ECAD EBOM docume without Manufacturer Part Number	nt with parts
	ОК

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EBOM approval

Design Engineers can approve EBOMs using a function similar to one described in chapter "CBOM approval". The system scans the first level of EBOM, retrieve the sub-components that are at same state of current part, promote the sub-components first and finally promote the current part.

For each part that has to be promoted, the system performs the same checks described for single part promotion (see chapter "Part state promotion"):

- EBOM must not contain the same part (recursive BOM)
- Drawings connected to part have to be at least in the state following the part state
- Previous part revisions have to be at least in the state following the part state

The only difference is related to the check about sub-components state:

- in single part promotion, EBOM must contain only parts at least in the state following the current part state (for example, if current part state is Preliminary, all sub-components have to be at least in state Review)
- in EBOM promotion the sub-components can be at same state of current part (for example, if current part state is Preliminary, the sub-components state can be Preliminary).

About CBOM approval and EBOM approval, the difference is related to number of levels scanned to during part promotion:

- in CBOM approval, all levels are scanned, means sub-components belongs to all sub-levels are promoted
- in EBOM approval, only first level is scanned, means sub-components belongs to second level has to be approved before current part

Promote from state Preliminary to state Review

User has to search Part Number, using functions described before, for example:

- Users can search by part number
- Using tab "My Parts"

User has to select command Bill Of Material and select icon "Promote Bom"

		mouniou . April, 2010 4										
000000557 00	^	EBOM EBOM Common	ME	BOM P	lant s	necif	Where Used	>>				
Bill Of Materials		📃 - Reports - 🥒 🛓		: 1	(🔽		3D Markup -	-) (M 📊	Change -	- »	Ó
Change Management					\sim	/						
		Name	4	6	**	Туре	State	Rev	F/N	Qty	U of M	C
Specs & Documents				_	_							
Related Parts		0000000557				EC	Preliminary	00			PCS	F
Collaboration		🖃 🔄 🐚 000007411				EC	Preliminary	00	10	1.0	PCS	F
Manufacturing Details		🖃 🔲 🐚 000007422				EC	Preliminary	00	20	1.0	PCS	E
Vendor Part Numbers		🖃 🛄 🐚 000000153				EC	Publish	00	30	1.0	PCS	C

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The user has to confirm the operation

Confirm EBOM	promotion?
ОК	Cancel

The system performs the checks described before, related to sub-components and drawing in state Preliminary:

- If there is a sub-component with an EBOM (means the EBOM is composed by 2 levels) containing components in state Preliminary, the system shows the list of sub-component to be approved before

Notice: The requirements are not met ::Object 'Electrical Part' '000007411' '00' is in state 'Preliminary', which is before the target state 'Review'.Object 'Electrical Part' '000007422' '00' is in state 'Preliminary', which is before the target state 'Review'.Object 'Electrical Part' '000007433' '00' is in state 'Preliminary', which is before the target state 'Review'.Object 'Electrical Part' '000007444' '00' is in state 'Preliminary', which is before the target state 'Review'.Object 'Electrical Part' '000007455' '00' is in state 'Preliminary', which is before the target state 'Review'.Object 'Electrical Part' 'Devent this page from creating additional dialogs
ОК

- If there is a part, that has to be approved, with a drawing in state Preliminary, the system shows the drawing name to be move at least to state Review.

Notice:	
The requirements are not met ::Object 'CAD Drawing' '000000010 'Preliminary', which is before the target state 'Review'.	15' '00A' is in state
	ОК

If all checks are passed, the parts contained in EBOM that was in state Preliminary are moved to state Review

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EBOM EBOM Common	MB	OM P	lant S	pecif	Where Used	>>				
📃 - Reports - 🥒 🛓] _	: 7	 Image: A start of the start of		30 Markup -	9	X8 💼	Change -	• »	ö - [
Name	4		:	Туре	State	Rev	F/N	Qty	U of M	Desci
0000000557				EC	Review	00			PCS	PCB
🖃 🔄 😓 000007411				EC	Review	00	10	1.0	PCS	PCBI
🖃 🔲 👆 000007422				EC	Review	00	20	1.0	PCS	BAS2
🖃 🔄 🐚 0000000153				EC	Publish	00	30	1.0	PCS	Color
🖃 🔲 🐚 000007433				ЕС	Review	00	40	2.0	PCS	Resis
🖃 🔄 🐚 000007444				EC	Review	00	50	0.0	PCS	Сара
				EC	Publish	01	60	2.0	PCS	Switc
🖃 🔄 🝆 000007455				EC	Review	00	70	2.0	PCS	Resis

Promote from state Review to state Approved

The function is similar to previous step; the difference is related to access to command and the form used to confirm the operation:

- the icon "Promote Bom" is available only to Senior Product Design Engineer and Senior Electrical Design Engineer
- the form used to confirm the operation is not only a message but the user can enter a comment

Part 000000557 rev.00: Promote Bom				
🚱 🔆 -				
	Fields in red italics are required			
State	Approved V			
Comments	EBQM approved			
	\frown			
	Done Cancel			
	\sim			

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The system performs the same checks described in previous step, but checking sub-components and drawings in the state Review:

- If there is a sub-component with an EBOM (means the EBOM is composed by 2 levels) containing components in state Review, the system shows the list of sub-component to be approved before
- If there is a part, that has to be approved, with a drawing in state Review, the system shows the drawing name to be move to state Approved or Publish.

EBON	EBOM Common	ME	BOM P	lant S	pecif	Whe	ere Used	Ма	rkups				
=-[Reports 🗸 🖉 🛓] _	\$	30	Markup -) A 📊	C	hange	• 🗖 🌡		•	¢
Name	3	4	ű	**	Туре		State	F	Rev	F/N	Qty		Uo
	000000557				EC Part	1	Approved	(00				PC
	6 000007411				EC Part	[Approved	(00	10		1.0	PC
	a 000007422				EC Part		Approved	1	00	20		1.0	PC
	a 0000000153				EC Part		Publish	-	00	30		1.0	PC
	a 000007433				EC Part		Approved	(00	40		2.0	PC
	a 000007444				EC Part		Approved		00	50		0.0	PC
+	a 0000000156				EC Part		Publish	/	01	60		2.0	PC
	a 000007455				EC Part		Approved		00	70		2.0	PC
							\smile						

If all checks are passed, the parts contained in EBOM that was in state Review are moved to state Approved

When the part state is Approved, the MBOM Engineer are able to define the Manufacturing Plant and push information to CMS systems (see document "MBOM Training").

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Demote from state Approved to state Preliminary or Review

When MBOM Engineer define the plant, the EBOM is promote to state Publish; in this case, in order to update the EBOM the Design Engineers have to create a Change Notice (see document "Engineering Change Training")

In order to update the EBOM before plant definition, Design Engineers are able to demote the EBOM and subcomponents from Bill of Material table: user has to select parts to demote and select icon "Demote" contained in toolbar.

EBOM EBOM Common	MB	BOM P	lant S	pecif Whe	ere Used M	arkups	
📃 - Reports - 🥒 🛓] [30	Markup 🗸 📲	🤊 🏘 📊 🤇	Change	- 🗔 ،
Name	4		:	Туре	State	Rev	F/N
E I I B <u>000000557</u>				EC Part	Approved	00	
i i ⊘ % <u>000007411</u>				EC Part	Approved	00	10
🖃 🔲 🍖 000007422				EC Part	Approved	00	20
🖃 🛄 🐜 0000000153				EC Part	Publish	00	30
🖃 🔲 🐜 000007433				EC Part	Approved	00	40
				EC Part	Approved	00	50
🕀 🔲 🐜 000000156				EC Part	Publish	01	60

The selected parts are move to state Review or Preliminary

EBOM EBOM Common	ME	BOM P	lant S	pecif	Where Used	Markups	;
- Reports - 🥒 🛓] _	; 7	30	Markup +	🤊 🗛 📊	Change	••
] Name	4	ß	:	Туре	State	Rev	F/N
000000557				EC Part	Review	00	
🖃 🔄 🐚 000007411				EC Part	Review	.00	10
🖃 🔄 🍋 000007422				EC Part	Approved	0	20
🖃 🔄 🐚 000000153				EC Part	Publish	0	30
🖃 🗌 🐚 000007433				EC Part	Approved	00	40
🖃 🥅 🐚 000007444				EC Part	Review	00	50
				EC Part	Publish	01	60
🖃 🥅 😽 000007455				EC Part	Approved	00	70

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Quality Release

The function is available to following roles, even if part state is Released:

- Supplier Quality Engineer
- Senior Supplier Quality Engineer
- Metrology
- Senior Metrology

User has to select command "Quality Release" contained in part details toolbar

		I MO	unicu . i cu a, 2010 10.1.	3.03 Am
000000010 00	Properties Ma	aterial Parts	CMS Information	Lifecycle
Bill Of Materials	🖉 🔊 🖣 🤌	• 🚺 🔿 🖣	🛛 🗖 🚱 🔆 ·	
Change Management	Name	0000000010		
Specs & Documents	Originator	Test Everythin	g	
Related Parts	Part Classification	\cup		

User has to select Quality Release

Part 0000000010 r	ev 00	
*.		
	Fields In red Italics are required	
Name	000000010	
Quality Release	Prototype / Initial sample 🗸	
	Fit for Function Obsolete	
	Prototype / Initial sample	
	Rejected Released	Done Cancel

Form contains information entered by Quality, as read only field

Properties Ma	aterial Parts	CMS Information	Lifecycle	Where Used	Revisions	Versions	History
🖉 🗟 🍙 🦂) 🛐 😭 🛛	🛯 🗔 🖗 🖓 ·					
Name	000000010			Revision	00		Stat
Originator	Test Everythin	ng		Originated	Apr 27, 2	015	Mod
Part Classification				Quality Release	Prototype	/ Initial sample	
Description	V1 Switch vol	ume scenario 1			_	_	
Design Purchase	Design			Long Lead Time Component	FALSE		
End Item	Yes			CMS Part Status			

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Status	Template			159

ENG08	Electronics	Component management
-------	-------------	-----------------------------

Purpose	Electronics Design Engineers can create, update and release Electronic	Status	Define			
	Components.					
Stakeholders	Electronics Design Engineers					
Beginning						
Interactions	Electronics Design Engineers can search Electronic Components.					
	Electronics Design Engineers can create new components, update inform	ation for co	omponents in			
	status Preliminary, promote components in status Review.					
	Senior Electronics Design Engineers can approve or reject and demote new components.					
End						
Constraints	None					

The tab "Electronic Components", contained in portal "Home Engineering User", shows the library of Electronic Components

<	>	<									
Ele	Electronic Compon Parts to Approve My CAD Drawings CAD Drawings to A Change Requests Change Order										
*	$\blacksquare \times \blacksquare \blacksquare$										
🗆 Na	ime 🔺	Rev	Description	Component Type	Package	Value /Micro Arch. + no of pir					
	APS0TXN005TIX0R	1	IC OPAMP GP RRO 3MH	OpAmps	SOTx	Pins					
	APXXS0N008ADX0R	1	Precision Amplifiers ULTR	OpAmps	SOxx	Pins					
🗆 🍋	APXXS0N008STX0R	1	IC, OPAMP, DUAL, R-R IN	OpAmps	SOxx	Pins					
	APXXS0N008STX1R	1	IC, OPAMP, DUAL, R-R IN	OpAmps	SOxx	Pins					
🗆 🍋	APXXS0N008STX2R	1	IC OP AMP LOW PWR D	OpAmps	SOxx	Pins					
	ASTS0PN014MXX0R	1	Potentiometer, NV	ASIC	TSSOP	Pins					
🗆 🍋	ASXXS0N006SRX0R	1	Interruptor, Reflective (Osr	ASIC	SOxx	Pins					
	CC040201N0KTX0R	1	Capacitor Ceramic, X7R,	Capacitor_Ceramic	402	0-99 nF					

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Creation

In order to create new component, select icon "Create" contain in the page toolbar



A dedicate form is used to define Electronic Component name and description

🕐 meth2015.gruppocdm.it:8080/enovia/common/emxCreate.jsp?form=type_CreateElectronicComponents&header=emxEngineeringCentral.PartCreate.Fo									
Create Part									
*⊀		0014 0472							
AutoName	Fields in red italics are required	0622 0N10 0N12 1001							
Series Type	Electrical Part	1002 1003 1004 100B							
Policy	Standard Part	1001 10N0 1101							
Description	Resistor	1201 1212 1241 1301 1302 v							
CodeC	RM V CodeP XXSM V CodeNo	1241 V CodeS SI V CodeV V CodePk V							
		Done Cancel							

The part number is retrieved using the following attributes value: CodeC, CodeP, CodeNo, CodeS, CodeV, CodePk.

After complete the creation, the tab "Electronic Components" is updated with new components.

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Detail form contains other technical information related to Electronic Component; using icon Edit, user can complete part creation.

Drop Images here Electrical Part (1)	R IC OPAMP GP RRO 3MHZ Stat SOT23-5 Own Moo	e : Preliminary Review er : Test Everything ified : 4/23/2015 11:16:19 AM	Drop files here		$\langle \hat{\mathbf{n}} \langle \rangle \mathcal{Q}$
Properties Images	Where Used Revisions History	Check CMS Mandato			×2
🖉 🔊 米 🖥 💷 🕻	📮 😪 🔆 -				
Name	APS0TXN005TIX0R	Primary Image			
Part Classification					
Revision	1	State	Preliminary		
Owner	Test Everything	Originated	Apr 23, 2015	Modified	Apr 23, 2015
Description	IC OPAMP GP RRO 3MHZ SOT23-5				
End Item	No	Design Purchase			
Lead Time	Unassigned	ECO to release			
Electronic Component detai	ils				
Component Type	OpAmps	Package	SOTx		
Value /Micro Arch. + no of pins / Size / Dominant Wavelength	Pins	Value Format	Nxxx		
Value replacing the (lowecase) x	5	Packaging	Reel		
Manufacturer	Texas Ins	Manufacturer Part Number	OPA171AQDBVRQ1		
Technical					
Unit of Measure	EA (each)	Material Number			

The functionalities described for parts (Spec and Reference Document, Classification, etc.) are available also for Electronic Components.

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Update EBOM using Electronic Components Library

The Electronic Engineer can complete the portion related to electronic components using the Electronic Components already defined; a dedicate command "Add Electronic Components" has been implemented .

L	Modified : Apr 1, 2016 5:46:58 PM								
000000557 00	EBOM EBOM Common	MBOM Plant Specif Wher							
Bill Of Materials	🚍 - Reports - 🛛 🗶			 ✓ 	🔟 Markup 🗸				
Change Management	Mass Update			_					
Specs & Documents									
Related Parts	Name		圙	Ë	Туре	Sta			
Collaboration	E I I I I I I I I I I I I I I I I I I I				EC Part	Re			
Manufacturing Details	🖃 🔄 👪 000007411				EC Part	Re			
Vendor Part Numbers	■ □ ➡ 000007422				EC Part	Арј			
CMS Information					EC Part	Pu			
Tool Parts									

User has to select the part to update and select icon Edit

User has to select command Add Existing from menu Action

000000557 00	EBOM EBOM	Common MBOM P
Bill Of Materials	- Reports -	× 🛃 🕻 🕽
Change Management	Add Existing	
Specs & Documents	Add Existing Pkg	
Related Parts	🔹 Add Electronic Cor	nponents
Collaboration	Import EBOM	
Manufacturing Details	Conv From	

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The command opens new window with all Electronic Components; user has to select parts to add and select command Done

Search Refinement	Search Results 1 - 50 of ap	prox. 442 Results	Page S	Bize: 50 🕨 (Max Value:	1000) 🕷	11
Q 2	E 🔍 • 📥 • 📑 • 🗄	3• 🔳 🔳 :	⅔-			
Spare Part: No	🗌 Name 🔺	Policy Rev	Туре	Description	State	
Standard Part	□ 👆 AP12060014ADX0B	EC Part 00	Elect	Test Electronic part	Publish	^
State: Preliminary Review Approved Publish Complete	APSOTXN005TIXOR	EC Part 00	Elect	IC OPAMP GP RRO 3MH	Publish	
Peer Review Create	🗌 🐚 APXXS0N008ADX0R	EC Part 00	Elect	Ultraprecision Operational	Publish	
	APXXS0N008STX0R	EC Part 00	Elect	ST MICROELECTONICS	Publish	
▼ Types	APXXS0N008STX1R	EC Part 00	Elect	IC,OPAMP,DUAL,R-R IN/	Publish	
⊡ □ Part(442)	APXXS0N008STX2R	EC Part 00	Elect	IC OP AMP LOW PWR D	Preli	
Hardware Part(442)	ASTSOPN014MXXOR	EC Part 00	Elect	Maxim IC 700-DS1845E	Publish	
 Attributes 	ASTSOPN014MXX0R	EC Part 00	Elect	POTENTIOMETER, NV	Publish	
Namo	ASXXS0N006SRX0R	EC Part 00	Elect	INTERRUPTOR, REFLE	Publish	
Name	ASXXSON006OSX0R	EC Part 00	Elect	INTERRUPTOR, REFLE	Publish	
Originated	ASXXSON008MRX0R	EC Part 00	Elect	VIC4423YM MICREL	Publish	
Modified	CC040201N0KTX0R	EC Part 00	Elect	CAP X7R,1nF 10% 50V 1	Publish	
Description	CC040210N0KTX0R	EC Part 00	Elect	CAP X7R,10nF 10% 50V	Publish	
Comment	🗌 😽 CC06030101AXX0R	EC Part 00	Elect	CAP CER X7R 0.1uF50V	Publish	
	🗌 🐜 CC06030101AXX1R	EC Part 00	Elect	CAP CER 0.1uF 50V 10	Publish	
Component Type	CC06030101KTX0R	EC Part 00	Elect	CAPACITOR CERAMIC, X	Publish	¥
Current Version 🗸	< >	<				7
< >>			_	Done	Cancel	

User can filter query results using the field Search Refinement (i.e. enter a portion of part number or a description) or using Attributes.

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User has to select command Save in order to apply the changes; user can use other function to complete EBOM information

	EBOM	EBOM Common	ME	BOM F	Plant S	specif When	e Used Marki	ups					
Ξ	- Re	eports 🗸 🔀] _	\$	- 🗸	😢 🖪 🔟	Markup 🗸 🍠	<i>8</i>	Change 🗸 [.	🔒 - 🛛 🗖 - 🚺	a- 📃 🖉 🖓 😫	۳.
М	lass Upd	ate]									(Save
	Name		4	ß		Туре	State	Rev	F/N	Qty	U of M	Description	DesignPurch
	✔ 👪	000000557				EC Part	Preliminary	00			PCS - PIECES	РСВ	Design
		000007411				EC Part	Review	00	10	1.0	PCS - PIECES	PCB FR4 1.6mm	Design
		000007422				EC Part	Approved	00	20	1.0	PCS - PIECES	BAS21	Design
		000000153				EC Part	Publish	00	30	1.0	PCS - PIECES	Color to CIE 1931	Design
		000007433				EC Part	Approved	00	40	2.0	PCS - PIECES	Resistors, 1k, 5%	Design
		000007444				EC Part	Review	00	50	0.0	PCS - PIECES	Capacitors 10nF	Design
	± 🗆 🗄	000000156				EC Part	Publish	01	60	2.0	PCS - PIECES	Switch	Purchase
		000007455				EC Part	Approved	00	70	2.0	PCS - PIECES	Resistors, 1k, 5%	Design
	± 🗌 😽	ASTSOPN014M				EC Part	Publish	00	71	1.0	PCS - PIECES	Maxim IC 700-DS1845E	Purchase
	± 🗌 😽	ASXXS0N006S				EC Part	Publish	00	72	1.0	PCS - PIECES	INTERRUPTOR, REFLE	Purchase
	+ 🗌 🍾	ASXXSON008M				EC Part	Publish	00	73	1.0	PCS - PIECES	VIC4423YM MICREL	Purchase

A dedicated view can be used to check and update Electronic Components information

•	II • III 🖉 🖓	(
cture	* Create New Table View	ər	F
	All Info		
	CMS Info		
	Costs Info	Ľ	
	Electronic Component View		
	Engineering	ŀ	
	Info 1: Description and Make-Buv		

EBOM	EBOM Common	MBOM Plant Specif	Whe	re Used	Marku	ps					
= • R	eports 🗸 🖉 🛃) 📫 🏞 🔽 🙆	30	Markup	- 1	🗛 📊 Chang	e• 🗔 🗸 🖁	•• ••••	🔋 🕗 ݣ (2 🗐	»»
Name		cription	F/N	Qty	Ref Des	DesignPurchase	Component Type	Manufacturer Part Number	Manufacturer	Package	Estimated
- 🗸 📑	000000557	З				Design					4.70253
	000007411	3 FR4 1.6mm	10	1.0	PCB	Design					0.

Version	5	Date:	12-Dec-2016	
Status	Template			165

ENG09	Packaging Components management				
Purpose	Packaging Engineers can create, update and release Packaging Status Define				
	Components.				
Stakeholders	Packaging Engineers				
Beginning					
Interactions	Packaging Engineers can search Packaging Components.				
	Packaging Engineers can create new components, update information for components in status				
	Preliminary, promote components in status Review.				
	Senior Packaging Engineers can approve or reject and demote new components.				
End					
Constraints	None				

The tab "Packaging Components", contained in portal "Home Engineering User", shows the library of Packaging Components

My Parts Parts to Appro	ove	My C	AD Drawings CAD Drawi	ngs to A CAD Dr	awings to R Elect	tronic Compon	ackaging Compone	>
* × 📮 斗 🖬	- 11	-	I 🖉 🖓 😫 🕱 🖇	-				
🗌 Name 🔺		Rev	Description	State	Dimension	Net Weight UoM	Weight	Part Weight Gross / (gra
□ Ø 71110		00	PLASTIC BAG 230MMX3	Publish			0.0	^
☐ 71119		00	PLASTIC BAG 305MMX3	Publish			0.0	
☐ 71180		00	CARTON BOX	Publish			0.0	
☐ 71181		00	CARTON BOX 270X270X	Publish			0.0	
☐ 71182		00	OUTER CARTON-74 X 5	Publish			0.0	
☐		00	CARTON BOX 387X233X	Publish			0.0	
☐ ∅ 71261		00	BLISTER TRAYS 18 CAVI	Publish			0.0	
2 271262		00	CARTON PARTITION 39	Publish			0.0	
🗌 🥔 71266		00	BLISTER TRAY(PVC)	Publish			0.0	
☐		00	BLISTER TRAY 270X270	Publish			0.0	
🗌 🥔 71962		00	CARTON BOX 250X180X	Publish			0.0	
☐		00	CARTON BOX 390X285X	Publish			0.0	
☐ ∅ 72012		00	CARTON BOX 373X283X	Publish			0.0	
🗌 🥔 72012-В		00	CARTON BOX 400 X 300	Publish			0.0	
🗌 🥔 72012-T		00	CARTON LID 390 X 400	Publish			0.0	
2024		00	CARTON PARTITION 37	Publish			0.0	
2025		00	CARTON PARTITION 29	Publish			0.0	
	<	00		D			0.0	>
								439 objects

Version	5	Date:	12-Dec-2016	
Status	Template			166

Creation

In order to create new component, select icon "Create" contain in the page toolbar



A dedicate form is used to define Packaging Component name and description

Create Part	
**	
	Fleids In red Italics are required
Part Name	AutoName
AutoName Series	Part Number
Туре	Packaging Part
Policy	EC Part
Description	CARTON BOX 10X10X10
	\frown
	Done Cancel

About part number, the user has to select the checkbox in order to user the autonumber feature; if not selected, the user has to enter manually the part number.

After complete the creation, the tab "Packaging Components" is updated with new components.

Version	5	Date:	12-Dec-2016	
Status	Template			167

Detail form contains other technical information related to Packaging Component; using icon Edit, user can complete part creation.

Drop Images here Packaging Part (CARTON BOX 1 00)	IOX10X10 State : Preliminary Owner : MarioP Modified : Apr 4, 2016 9	→ Review	Drop files here					<合 <
000007466 00	Properties C	MS Information Lifecycle	Where Used	Revisions	Versions	History Ima	iges Route		
Bill Of Materials	🖉 🔊 🖣 A	≽ 國 🔳 🗔 🔇 🔆 -							
Change Management	Name	000007466		Revis	sion	00		State	Preliminary
Specs & Documents	Originator	Mario Pullicino		Origi	nated	Apr 4, 2016		Modified	Apr 4, 2016
Related Parts	Part Classification	÷		Quali	ity Release				
Collaboration	Description	CARTON BOX 10X10X10							
Manufacturing Details	Design Purchase	Design		Long Com	Lead Time ponent	FALSE			
Vendor Part Numbers	End Item	Yes		CMS	Part Status				
CMS Information	Packaging Compo	nent Details							
Tool Parts	Packaging Details	•		Contr	rol Item				
Referenced By	Dimension			Dunn	nage Weight	0.0			
Classification PowerView	Net Weight per Box	. 0.0		Num Layer	ber Box per r	0			
Issues	Maximum Layer per Pallet	0		Plast	ic Bounding	Ν			
	Protection Corner	Ν		Strete	ch Wrap	Ν			
	Technical								
	Net Weight	0.0		Gros	s Weight	0.0		Net Weight UOM	
	Carry Over Parts			Rem	arks				
	Similar Parts								
	Classification Path								

The functionalities described for parts (Spec and Reference Document, Classification, etc.) are available also for Packaging Components.

Version	5	Date:	12-Dec-2016	
Status	Template			168

Update EBOM using Packaging Components Library

The Packaging Engineer can complete the Packaging EBOM using the Packaging Components already defined; a dedicate command "Add Component Pkg" has been implemented .

000000552 00	EBOM EBOM Common	ME	BOM P	lant S	peci
Bill Of Materials	🚍 - Reports -		2	 ✓ 	
Change Management	Mass Update	1			
Specs & Documents					
Related Parts	Name		ß	Ë	Тур
Collaboration	HI ☑ Ⅰ <u>000000552</u>				EC
Manufacturing Details	🖃 🗔 👪 000000555				EC
Vendor Part Numbers	000000556				EC
CMS Information					EC
Tool Parts					FC

User has to select the part to update and select icon Edit

User has to select command Add Existing from menu Action

	Modified : A	pr 1, 201
000000552 00	EBOM EBOM Common	MBON
Bill Of Materials	🚍 - Reports - 🛛 🗶 🛓	
Change Management	Create Parts	
Specs & Documents	Add Existing	1
Related Parts	+ Add Existing Pkg	4
Collaboration	Add Electronic Components	
Manufacturing Details		

Version	5	Date:	12-Dec-2016	
Status	Template			169

ENG10	Material	Parts mana	gement
-------	----------	------------	--------

Purpose	Design Engineers can create, update and release Material Parts.	Status	Define				
Stakeholders	Design Engineers						
Beginning							
Interactions	Design Engineers can search Material Parts.						
	Design Engineers can create new material parts, update information for material parts in status						
	Preliminary, promote material parts in status Review.						
	Senior Design Engineers can approve or reject and demote new material parts.						
End							
Constraints	None						

The tab "Material Parts", contained in portal "Home Engineering User", shows the library of Material Parts

My P	arts My CAD Drawir	ngs Electronic Compon Pacl	kaging Compone Material Parts)					
*	$\blacksquare \times \square \square \square \blacksquare \blacksquare \blacksquare \blacksquare \blacksquare \blacksquare \blacksquare \blacksquare \blacksquare \bigotimes \blacksquare \bigotimes \blacksquare$								
🗌 Nam	e 🔺	Description	State	Approved For Production	Request For Pro				
	090100	DURETHAN BKV 30H 1.0 000000 -	Publish	YES	NO				
	090101	DURETHAN BKV 30H 2.0 901510 -	Publish	YES	NO				
	090107	BEETLE 60 GS6 9008 - BLACK	Publish	YES	NO				
	090108	DURETHAN BKV 30 - RED	Publish	YES	NO				
	090110	MINLON 10B1-40 BK-61 - BLACK	Publish	YES	NO				
	090116	DURETHAN BKV 30H1.0 700314 -	Publish	YES	NO				
	090117	DURETHAN BKV 15H 2.0 9005/5	Publish	YES	NO				
	090133	CAPRON 8233G HS BK102-BLACK	Publish	YES	NO				
	090134	CAPRON 8231 G HS BK-102 14%GF	Publish	YES	NO				
	090136	ULTRAMID B3WG10 RO2 UN	Publish	YES	NO				
	090139	MINLON 10B1-40 NC-10-NATURAL	Publish	YES	NO				

Version	5	Date:	12-Dec-2016	
Status	Template			170

Creation

In order to create new component, select icon "Create" contain in the page toolbar



A dedicate form is used to define Material Part name and description

Create Part	
- ≪	
	Flekis In red Italics are required
Part Name	AltoName AltoName
AutoName Series	Part Number 🖌
Туре	Material Part
Policy	Material Part
	DURETHAN BKY BLACK
Description	
	\frown
	Done Cancel

About part number, the user has to select the checkbox in order to user the autonumber feature; if not selected, the user has to enter manually the part number.

After complete the creation, the tab "Material Parts" is updated with new components.

Version	5	Date:	12-Dec-2016	
Status	Template			171

Detail form contains other technical information related to Material Parts; using icon Edit, user can complete part creation.

Properties CI	IS Information	Lifecycle	History	Images	Route			
🖉 🗟 🔖 🦂	» 💷 🗎 🗔	Q 🔆 -						
Name	000007470				Revision	00A	State	Preliminary
Originator	Evan Stringos				Originated	Apr 4, 2016	Modified	Apr 4, 2016
Quality Release								
Description	DURETHAN BK	V BLACK						
Design Purchase	Design							
End Item	Yes							
Material Part Detail	S							
Request For Production	NO							
Date					Comments			
Usage Location								
Europe	NO				China	NO	US	NO
Technical								
Net Weight	0.0				Gross Weight	0.0	Net Weight UOM	
Carry Over Parts					Remarks			
Similar Parts								
Classification Path								

The most of the functionalities described for parts (Spec and Reference Document, Classification, etc.) are available also for Packaging Components.

The functions not available are:

- Material Parts
- Where Used (for Material Parts not approved)
- Revision and Version
- Bill Of Material
- Related Part
- Manufacturing Details (for Material Parts not approved)

The Material Part owner can request the new material for production; the user has to change the flag "Request for Production" to "YES", enter a date and a comment, to describe the request.

/iew	Design Purchase	Design 🗸				
	End Item	Yes 🗸				
	Material Part Details					
	Request For Production	NO V				
	Date	NO YES Apr 1, 2016	Comments	New Material Part		
	Usage Location					
	Europe	NO ¥	China	NO ¥	US	NO ¥
	Technical					
						Done

Version	5	Date:	12-Dec-2016	
Status	Template			172

Lifecycle

Material Parts lifecycle has the same state list of EC Part lifecycle but the approval process is different

Properties (CMS Information	Lifecycle	History	Images	Route				
Lifecycle									
000007470 rev 0	0A: Lifecycle								
≡ • 🔽 📫	🏞 🗖 🕉								
Preliminary Review Preliminary Review Preliminary Approved Publish Obsolete Tasks/Signatures Approvals Y Publish Publish Obsolete Preliminary Publish Publish Obsolete									
× <u></u> <u></u>	L 💷 🥒 🥅		- 🖉 🔽						
	/ -	•- ¢	• 🖉 🍸	S %.		1			
State	Assignee	• · •	• 🙋 🍸	Signature		Task Title	Comments/Instructions	Action	Due Date
State	Assignee		• 🖉 🍸	Signature		Task Title	Comments/Instructions	Action	Due Date
State Preliminary Review	Assignee	Engineer	• 🖉 🏹 Task/	Signature enior Design	Engineer	Task Title	Comments/Instructions	Action Pending	Due Date
State State Preliminary Review Review	 Assignee Senior Design MEM Safety Ma 	Engineer nager	 Task/ Se 	Signature enior Design afety Manager	Engineer	Task Title	Comments/Instructions	Action Pending Pending	Due Date
State State Preliminary Review Review Review	 Assignee Senior Design MEM Safety Ma MEM Environm 	Engineer nager ent Manager	Task/	Signature Signature enior Design afety Manager nvironment Ma	Engineer anager	Task Title	Comments/Instructions	Action Pending Pending Pending	Due Date
State State Preliminary Review Review Review Approved	 Assignee Senior Design MEM Safety Ma MEM Environm MEM Engineer 	Engineer nager ent Manager Manager	Task/	Signature enior Design afety Manager nvironment Manager ngineer Mana	Engineer anager ger	Task Title	Comments/Instructions	Action Pending Pending Pending Pending	Due Date
State Preliminary Review Review Review Approved Publish	 Assignee Senior Design MEM Safety Ma MEM Environm MEM Engineer 	Engineer nager ent Manager Manager	Task/	Signature enior Design afety Manager avironment M: agineer Mana	Engineer anager ger	Task Title	Comments/Instructions	Action Pending Pending Pending Pending	Due Date

The users involved in part promotion are the following:

- State Preliminary: Design Engineer users can promote from state Preliminary to state Review
- State Review: three signatures have to be provided:
 - Senior Design Engineer
 - Safety Manager
 - Environment Manager

Only after the three signatures have been provided, the last approver can promote from state Review to state Approved

- State Approved: Engineer Manager can promote from state Approved to state Publish

Material Parts can used during part details definition (see chapter "Material Parts" in "Part Header portal"), in order to define Base Material, Painting Material, Plating Material.

In MBOM management, only Material Parts in state Publish can be used.

Version	5	Date:	12-Dec-2016	
Status	Template			173

Material Part state promotion

Promote from state Preliminary to state Review

There is no check on promote the Material Part state from Preliminary to Review; the Material Part owner has the responsibility to classify the new Material Part in order to complete the information.

About part promotion, user can use the same functions described for EC Part (dedicated icon in part header or features contained in command Lifecycle)

Promote from state Review to state Approved

When Material Part owner promote the state to Review, all users with roles Senior Design Engineer, Safety Manager and Environment Manager receive a notification, in order to notify there is a new Material Part ready for approval.

	Material 000007470 is re	Mail Properties			
	Attachments	Actions 🗸 🕺 💸 🕶			
		From	UserAgent		
		То	Allen Carl Bonnici Test;Joseph Zammit;Matthew Spiteri;Eugenio Vella;Steve Zahra;Samantha Grima;Alexander Galea;Mario Pullicino;Giuseppe Loreto		
		CC			
◀		Subject	Material 000007470 is ready for approval		
		Message	Please, check Material contents Material Part 000007470 00A		
		Received	Apr 4, 2016		

The user can search for the Material Part or can click on hyperlink contained in mail Message.

In order to promote the part from state Review to Approved, the user has to enter an electronic signature. If the user tries to promote the part state without apply the signature, an error message is shown

Version	5	Date:	12-Dec-2016	
Status	Template			174



The tab Tasks/Signature contains the function to approve or reject the part:

Properties CMS Information	Properties CMS Information Lifecycle History Images Route							
Lifecycle								
000007470 rev 00A: Lifecycle								
≡· 🖌 🛱 🖬 🔆 🕅	≡· 🔽 异 💫 -							
	Preliminary — Review Approved — Publish — Obsolete							
Table (Cinesture)								
Show: All Approvals 🗸 Approval Status:	All v Filter							
🏠 Name 🛆	Approver	Title Approval Status	Approval/Due Date Com	nmen				
Environment Manager	MEM Environment Manager(Role)	Pending						
🖉 Safety Manager	MEM Safety Manager(Role)	Pendina						
Senior Design Engineer	Senior Design Engineer(Role)	Awaiting Approval						

In order to enter the electronic signature, select the link Awaiting Approval or the link in Lifecycle form. The hyperlink available depends on user role.



Version	5	Date:	12-Dec-2016	
Status	Template			175

In order to promote the part state, select icon "Promote" contained in Lifecycle toolbar



Promote from state Approved to state Publish

When Material Part owner promote the state to Review, all users with roles Engineer Manager receive a notification, in order to notify there is a new Material Part ready for approval.

Also the Material Part owner receive a notification, in order to notify that the Material Part has been approved.

	Material 000007470 has	Mail Properties		
	Attachments	Actions 🗸 💸 🗸		
		From	UserAgent	
		То	Evan Stringos	
		cc		
		Subject	Material 000007470 has been approved	
٩		Message	Material 000007470 has been approved Material Part 000007470 00A	
		Received	Apr 4, 2016	

Engineer Manager has to enter an electronic signature; the user can search for the Material Part or can click on hyperlink contained in mail Message.

Engineer Manager has also to update Material Part details in order to change the flag "Approved for Production" to "YES".

Version	5	Date:	12-Dec-2016	
Status	Template			176

	Englight	163 1				
	Material Part Details					
S	Approved For Production	NO V	Request For Production	YES		
		YES		New Material		
	Date	Apr 1, 2016	Comments			
						.::
	Usage Location					
	Europe	NO ¥	China	NO ¥	US	NO ¥
	Technical					\sim
						Done

In order to promote the part from state Approved to Publish, the user has to enter an electronic signature.

Properties	CMS Information	Lifecycle	History	Images	Route			
Lifecycle								
000007470 re	v 00A: Lifecycle							
≡ • 🖌 📕	\$24%							
	Prelim	nary ———	Review -	— ⊘ → App	roved	Publish	Obsolete	
Tasks/Signat	ures Approvals							
	ō- 💎 😪 🔆-							
Show: All Appro	vals 🗸 Approval Stat	us: All	✓ Filter					
🔹 Name 🛆	Appr	over		Title	Approval Stat	A	pproval/Due Date	Сог
🖋 Engine	er Manager MEM	Engineer Man	ager(Role)		Awaiting Approximation Appr	oval		

In order to promote the part state, select icon "Promote" contained in Lifecycle toolbar



After approval, all users with roles Senior Operations Manager receive a notification, in order to notify there is a new Material Part approved for production.

Version	5	Date:	12-Dec-2016	
Status	Template			177

ENG11 Documents related to parts

Purpose	Design Engineers can search documents related to parts, manages	Status	Define
-	documents revisioning and versioning.		
Stakeholders	Design Engineers		
Beginning			
Interactions	Design Engineers can search documents related to a part.		
	Design Engineers can create new documents, update and revise existing de	ocuments.	
End			
Constraints	None		

Reference Documents are used for provide additional information (i.e. quality document, certification, etc.). Specifications instead are used to define the part; about Specification, see chapter "CAD Drawing management".

A reference document can be connected to a part in any lifecycle state, even if it is released, since these documents do not define the part; a specification can be connected to a part in Preliminary state.

Search for a part number to upload a reference document

Drop images here Part (1)	Socket State Owner Modi	e : Preliminary → R er : Test Everything fied : 4/23/2015 10:33:0	Drop files here	
000000005 1	Properties	Images Where	Used Revisio	ons History :
Bill Of Materials	*	h 🍫 💷 🗖	🚱 🔆 -	
Equivalents	Name	000000005	Primary Image	

Create New Document with Drag & Drop

Drag & drop a document from local folder to drop zone in header. After documents upload, header is updated with link to download document

Drop images here Part (1)	Socket Sta Own Moo	te : Preliminary Review ner : Test Everything dified : 4/23/2015 3:45:04 PM	Drop files here Bere Bere Bere Berence Documents
000000005 1	Properties	Images Where Used	Revisions History »

Version	5	Date:	12-Dec-2016	
Status	Template			178

Reference Document page

Select Specs & Documents command, select Reference Document tab. Table contains all documents uploaded.

000000005 1	Specifications	ence Documen							
Bill Of Materials	› ■ - □ □ ↓ □ + □ + □ + □ + □ + □ + □ + □ + □								
Equivalents	Name			Title	Bay	Vor	Tune	Actions	Dec
Change Management		-	-1e ^r	Inde	Rev	ver	туре	Actions	Des
Specs & Documents	DOC-0000021	0/1		PI-ENG 01 Issue 06 Change Manage	1	1	Document	≥ 7 8 6	
Related Parts	DOC-0000022	0/1		PI-REL 01 Issue 05 Initial Release of C	1	1	Document	a 🔻 🕞 🗗	
Collaboration	DOC-000023	0/1		PI-REL 02 Issue 06 Release of Bought	1	1	Document	3 4 € €	
Multiple Ownership Access									
M C C D C D									

Action menu contains command to Add Existing document as reference or command to create new document with specific name and several documents



Adding an existing document

Select Add Existing command; enter search criteria; select document to connect as reference

Search Refinement		Search Results		Results: 10, 1 selected
Search	9	* 🔄 🗣 🖬	• 🛃 🟹 🇮 🔆 •	
Case Sensitive		□ Name ▲	Title	Related Phys
Limit to 100 results		21720713030130	X132-EF B-1000F-3F EG-V1.4 17-03-12.000	^
		▲ 🗋 🎦 21428487108107	X152-EPB-ROOF-SPEC-v1.4 17-05-12.doc	
	Ð	31429022968583	X152-EPB-ROOF-SPEC-v1.4 17-05-12.doc	
Originated		41428564105601	X152-EPB-ROOF-SPEC-v1.4 17-05-12.doc	
	C	751428567339232	X152-EPB-ROOF-SPEC-v1.4 17-05-12.doc	
Title		DOC-000002	X152-EPB-ROOF-SPEC-v1.4 17-05-12.doc	
X152*		DOC-0000006	X152-EPB-ROOF-SPEC-v1.4 17-05-12.doc	
Modified		DOC-000008	X152-EPB-ROOF-SPEC-v1.4 17-05-12.doc	
		DOC-0000011	X152-EPB-ROOF-SPEC-v1.4 17-05-12.doc	
Description		☑ [№] <u>DOC-0000013</u>	X152-EPB-ROOF-SPEC-v1.4 17-05-12.doc	
•		<	> <	>
		¥		Submit

Version	5	Date:	12-Dec-2016	
Status	Template			179

Create new document

Step 1 of 2:Specify	Details
-≪	
Fields in red italics are require	id.
Name	☑ AutoName
Туре	Document
Policy	Document Release V
Title	Component Specificatio
Description	00000005 Component Specification Manufacturer: Panasonic
Document Type	Manufactoring Records
	Next Cancel

From Action menu, select Create Document; enter document details.

Upload one or more attachments and confirm

Step 2 of 2: Upload Files		
*		
File Format	Comments	Î
Browse_ PI-REL 14 Issue 04 Management of PPAP Samples.doc		
Browse_ PI-REL 03 Issue 00 INJ 1st Off Release & Product_Process Monitoring.doc generic v		ľ
Browse_ PI-REL 02 Issue 06 Release of Bought In Production Commodities.doc		
Browse_ No file selected.		Ŷ
	Previous Done Cance	el

Version	5	Date:	12-Dec-2016	
Status	Template			180
Version and Revision

Create new version for an existing document

Reference document table shows all documents connect to a part number

Specifications Ref	erence Documen									
	•	2 💎 🗟	≣ ‰∙							
□ Name ▲	8	-@-	Title	Rev	Ver	Туре	Actions	Description	State	
DOC-0000013	0/1		X152-EPB	1	1	Document	≥ 5 6		In Work	÷
DOC-0000021	0/1		PI-ENG 01 I	1	1	Document	a 77 🕈 🖓 🕈		In Work	æ
DOC-0000022	0/1		PI-REL 01 I	1	1	Document	a 77 🕈 🖓 🕈		In Work	슈
DOC-0000023	0/1		PI-REL 02 I	1	1	Document	a 7 6 6		In Work	-æ
DOC-0000024	0/3		Component	0	Th	Document	a 🛓 🕃 🗗	0000000005 Component	In Work	÷

Table contains some icons, used to view all attachments and upload new versions:

🔊 🛓 🔂 🗗

Select icon checkout and download locally files (if more files exist, a zip file is created). Icons are changed: object is locked and a new icon is present, to checkin new version

Select Checkin icon, browse and select a file to update; enter a mandatory comment

Update Files		
*-		
Current File Updated File Format	Comments	
PI-REL 14 Issue 04 Management of PPAP Samples.doc BrowsePI-REL 14 Issue 04 Management of PPAP Samples.doc generic v	New version	:
PI-REL 03 Issue 00 INJ 1st Off Release & Product_Process Monitoring.doc BrowseNo file selected. generic v		.::
PI-REL 02 Issue 06 Release of Bought In Production Commodities.doc Browse No file selected. generic v		
javascript:this.frames['checkinFrame'].checkinFile()	Done	Cancel

Version	5	Date:	12-Dec-2016	
Status	Template			181

Select link to document from table; a form with document details and files uploaded is opened

DOC-0000024 Component Specification Secure 100 N	000000005 Component Specification Aanufacturer: Panasonic	Sta Ow Mod	te : Private + Inner : Test Everythin dified : 4/23/2015 4	In Work + Frozen ng I:18:21 PM						
Component Specification	≡- %-									
Files	Name	DOC-00	000024							
File Versions	Revision	0								
Approvals	Туре	Docume	ent							
Revisions	Vault	eService	e Production							
Issues	Title	Compor	nent Specification							
Routes	Description	0000000 Manufac	005 Component S turer: Panasonic	Specification						
Discussions	State	In Work								
Lifecycle	Owner	Test Eve	erything							
Multiple Ownership Access	Originated	Apr 23, 2	2015							
History	Modified	Apr 23, 2	2015							
Where Used	Policy	Docume	ent Release							
Where obed	Access Type	Inherited	I							
	Document Type	Manufac	toring Records							
	🗛 · 📰 · 🔜 🏹	')罵 🆇	≩ -							
	🗌 File Name 🔺			Ver	Originated	Comments	Originator	Format	File Size	Actions
	🗆 🎦 PI-REL 02 Issue 06	Release	8	1	Apr 23, 2015		Test Everything	generic	345,00 KB	046
	PI-REL 03 Issue 00	INJ 1st O	8	1	Apr 23, 2015		Test Everything	generic	344,00 KB	14
	PI-REL 14 Issue 04	Managen		2	Apr 23, 2015	New version	Test Everything	generic	0,59 MB	

Files table shows only last version of documents; contains also icon to lock or unlock documents

➡- ः 🛛 🖉 🏹 🎾	§-							
☐ File Name ▲	8	Ver	Originated	Comments	Originator	Format	File Size	Actions
PI-REL 02 Issue 06 Release	8	1	Apr 23, 2015	- -	Test Everything	generic	345,00 KB	14
PI-REL 03 Issue 00 INJ 1st O	8	1	Apr 23, 2015		Test Everything	generic	344,00 KB	01284
🔲 🖺 PI-REL 14 Issue 04 Managem		2	Apr 23, 2015	New version	Test Everything	generic	0,59 MB	02 🕃 🔒

Version	5	Date:	12-Dec-2016	
Status	Template			182

Create new revision for an existing document

Only documents in state Released can be revised

DOC-0000024 Component Specification	0000000005 Component Specification	State : Released Owner : Test Everything
Document (0)	Manufacturer: Panasonic	Modified : 4/23/2015 4:2
≡- ≫-		
📥 Download	-0000024	
Revise		
Revise With Files	iment	
🔊 🔊 Subscribe	vice Production	
- Push Subscription	Component Specification	

From Action menu, select Revise command to create a new revision without attachments; select Revise With Files to create a new revision with same file referenced from previous revision

Version	5	Date:	12-Dec-2016	
Status	Template			183

ENG12 ECAD documents management

users will design new products and PCBs using when design is complete, they will use Document nalities to upload documents in PLM.	Status	Define
ion, attachments upload, versioning and approval pr	ocess.	
	users will design new products and PCBs using when design is complete, they will use Document nalities to upload documents in PLM. tion, attachments upload, versioning and approval pr	users will design new products and PCBs using when design is complete, they will use Document nalities to upload documents in PLM. tion, attachments upload, versioning and approval process.

Creation

Step 1 Select Reference Document command from Categories menu; select command ECAD: Create

000000552 00	Specifications	Refere	nce Do	cume	n			
Bill Of Materials	=				2	7		A 10.
Change Management	* Document		Ì.				Title	
Specs & Documents	Add Existing		-		1		Thue	R
Related Parts			-					
Collaboration	Download							
Manufacturing Details	Checkout							
Vendor Part Numbers	E Remove							
CMS Information	* ECAD: Create							
Tool Parts								

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Status	Template			184

Step 2 Create new document using Create ECAD Document

Select Name (Autoname function is provided), Title, Description and Document Type (Type and Policy are already populated with default values); after select command Next

Step 1 of 2:Specify	Details
-≪	
Fields in red Italics are required.	
Name	AutoName
Туре	ECAD Document
Policy	ECAD Document
Title	PCB Document
Description	PCB Document
Document Approver Role	✓
Document Type	Product Engineering
	Next Cancel

Step3 Select files from local PC

Select format from drop-down list and browse to select files

Step 2 of 2: Upload Files			
**			
File Format			Comments
Browse 2LEW32_2_5.PCB)		.::
Browse 51-930580.PobDoc			
Browse 51-930580-011.pcblib_v	iewstate		
Browse No file selected.			
			Previous Done Cancel
/ersion	5	Date:	12-Dec-2016
tatus	Template		

ECAD document is created and connected to part number

000000552 00	Specifications	Reference	e Documen							
Bill Of Materials	≡ • □ □	• •	-	7 5	🚱 🗐 🔆 -					
Change Management				- •						
Specs & Documents	Name 🔺		8	•	Title	Rev	Ver	Туре	Actions	Description
Related Parts	DOC-0000211		0/3		PCB Document	00A	ŝ	ECAD	M 🛓	PCB Document
Collaboration										

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Status	Template			186

Document Details

Users can search for ECAD documents using several functionalities (search using field in top bar, using the specific search ECAD, from table Reference Document in part categories, etc.).

DOC-0000211 PCB Document	PCB Document	State : Prelim Owner : matthew Modified : Apr 1.	inary + v.spiteri 2016 12:20	Review					く合	<>2
PCB Document	≣ - %	-								
Files	Name	DC	C-000021	11						
File Versions	Revision	00/	Ą							
Revisions	Туре	EC	AD Docun	nent						
Issues	Vault	eS	ervice Pro	duction						
Routes	Title	PC	B Docume	ent						
Life surely	Description	PC	B Docume	ent						
Litecycle	State	Pre	eliminary							
History	Owner	Ma	tthew Spit	eri						
Where Used	Originated	Api	r 1, 2016							
Classification	Modified	Api	r 1, 2016							
Referenced By	Policy	EC	AD Docun	nent						
rtoloronood by	Access Type	Inh	erited							
	Document Typ	pe Pro	duct Engi	neering						
	Classification	Path(s)								
	• ••	I	1 🔆 -							
	📄 File Name 🛛	•		Ver	Originated	Comments	Originator	Format	File Size	Actions
	2LEW32_2	_5.PCB		1	Apr 1, 2016 1		Matthew Spiteri	GERBER	0.73 MB	◑ੈॾੈ₿ੇ
	51-930580	-011.pcblib_vie	ws	1	Apr 1, 2016 1		Matthew Spiteri	NCDRILL	3.13 KB	ᢀ≰₿≘
	51-930580	.PcbDoc		1	Apr 1, 2016 1		Matthew Spiteri	XY	1.83 MB	 ▲ & ⊆

The document detail form is composed by the following section:

- System defined field:
 - Type, Name, user originator, originated date, last modified date
- Attributes specific for drawing type:
 - Description, Document Type
- Table with files uploaded

Menu Actions:

The menu Actions contain depends on user permission and document state:

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Status	Template			187

Owner : mattney
Modified : Apr 1,
(□ ·) ☆ ·
Edit Details
📥 Download
🗟 Checkout
Upload/Check In
Revise
🚯 Revise With Files
Subscribe
PCB Revise
× Delete This Version
Push Subscription
× Delete All Versions

- Revise: allows users to create a new Change Reference with no files copied from previous revision
- Revise With Files: allows users to create a new Change Reference with same files copied from previous revision
- PCB Revise: similar to Revise With Files; only difference is format "bom" is not copied into new revision

The other functionalities are the same described for Drawings and Documents (see chapter "Drawing Details")

Menu Category:

The menu Category contains the following commands:

- Name: Document Number, it's also a link to document details form
- Files: allows users to see all files uploaded, only last versions
- File Versions: allows users to see all files uploaded, all versions
- Revisions: allows users to view and create new document revision (only Change Notice)
- Issues: the tab contains the issues created on current document
- **Routes:** allows users to create additional approval process, other than mandatory approval by Senior Design Engineer
- Lifecycle: allows users to view and update document state
- **History:** allows users to view all actions performed on document
- Where Used: allows users to search for parts related to document
- Classification: this page allows the users to classify the document
- Referenced by: the table shows all PLM objects connected to current document

About Files, File Versions, Issues, Routes, History, Where Used, Classification and Referenced By, see same chapters in "Part Categories" and "Drawing Details"

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Lifecycle

The command allows users to view and update ECAD document state

2 🔆 -								
Preliminary ———	Review	<i>—</i> ∕ →	Approved	⊢	Publish	⊢→	Cancelled	

ECAD document are governed by policy with following states:

- Preliminary: only ECAD document owner can update object, all Design Engineers are able to view the document
- Review: used by Senior Electrical Design Engineer to approve or reject drawing
- Approved and Publish: ECAD document is visible to other users
- Cancelled: all Design Engineers are able to view the document, only Senior Electrical Design Engineer can revise the document

ECAD document owner can delete object in state Preliminary.

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ECAD document state promotion and demotion

The users involved in ECAD document promotion are the following:

- State Preliminary: Design Engineer users can promote from state Preliminary to state Review
- State Review: Senior Electrical Design Engineer users can promote from state Review to state Approved
- State Approved: Senior Electrical Design Engineer users can promote from state Approved to state Publish

Check performed before move state from Preliminary to state Review

In order to promote the document state, the owner has to upload a file for each of following formats: GERBER, XY, NCDRILL, DXT_TOP_BTM, bom, Schematic, Layout, PANEL_GERBER_DATA

If a file is missing, the system cancels the promote operation and pop ups an error message with the first format missing.

Promotion Failed:java.lang.Exception: Pro	omotion failed: file format DXT_TOP_BTM missing
	ОК

Format PANEL_GERBER_DATA is mandatory if part connected to ECAD document is Make, otherwise the file is not mandatory.

If files are missing, the user has to upload files related to missing formats using the function "Upload/Check In" contained in menu Actions and in command Files



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Status	Template			190

Promote from state Preliminary to state Review

In order to promote a document from state Preliminary to state Review, the user can use the following functions:

- The dedicated portion in document header
- The icon contained in lifecycle toolbar
- The command contained in lifecycle menu Action

0000211 icument 4D Document (00A)	PCB Document	State : Preliminary Review Owner : State: Modified : Apr 1, 2016 1:36:08 PM
Document	Lifecycle]
	DOC-00002	11 rev 00A: Lifecycle
'ersions		
sions		
s	Promote	Preliminary — Review — Review /
es	Demote	

Tab "My CAD Drawings" contains also ECAD documents in status Preliminary belonging to user; Design Engineer has to select drawings to approve and promote to status Review using dedicated icons contained in toolbar

My Parts Parts to Approv	ve	My CAD Drawings CAD E	Drawings to A	CAD Drawings 1
	• -	🏗 - 📃 🖉 🏹 😪	▦ і‰•	
🗌 Name 🔺	Rev	Description	Drawing Format	Supporting Typ
00000003	00A	test	-	-
000000010	01C	test 1	MEM Component	N/A
000000105	00B	test	MEM Component	-
000007011	00B		-	-
🗌 🛗 453052-A	05H	MEM Assembly Drawing	MEM Assembly	Change Notice
🗌 🛱 2007	00A		Lab Jig	-
DOC-0000211	00A	PCB Document		
E-011000007366	00A		Lab Jig	-
	004		Lob lia	

These functions are available only to document owner.

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Status	Template			191

Promote from state Review to state Approved

Tab "CAD Drawing to Approve" contains ECAD documents in status Review, ready to be approved by Senior Electrical Design Manager. The tab is available only to users with role Senior Electrical Design Engineer.

In order to promote the document from state Review to Approved, the user has to enter an electronic signature. If the user tries to promote the drawing state without apply the signature, an error message is shown

Promotion Failed: Cannot promot	e - all requirements not satisfied
	ОК

The tab Tasks/Signature contains the function to approve or reject the drawing:

Lifecycle				
DOC-0000211 rev 00A: Lifecycle				
🚍 - 🖌 🎜 Go To Canc	elled 🗔 🞇			
F	Preliminary — Review	Approved	→ Publish	Cancelled
Tasks/Signatures Approvals				
🔽 🗔 🗔 - 🐬 🔮 💸	•			
Show: All Approvals 🗸 Approval Sta	tus: All 🗸 Filter			
🚯 Name 🛆	Approver	Title	Approval Status	Approval/Due
Senior Electrical Engineer	EE Senior Product Electronics Engin	eer(Role)	Awaiting Approval)

In order to enter the electronic signature, select the link Awaiting Approval or the link in Lifecycle form.

Version	5	Date:	12-Dec-2016	
Status	Template			192

The system opens a new window; the user has to select the checkbox Approve, enter an optional comment and select command Done

Approval	
🚱 🔆 -	
Fleids in red Italics are i	egulred.
Approval	1
Comments	Document approved
Action	Approve Sejest Ignore
	\frown
	Done Cancel

After, the user has to promote the document state using the icon

In order to reject the document, user has to select the checkbox Reject, enter a comment and select command Done

Version	5	Date:	12-Dec-2016	
Status	Template			193

Approval	
😪 🔆 -	
Fleids in red Italics are required.	
Approval	1
Comments	Check PCB content
Action	Reject
	Done Cancel

After, the user has to demote the document state using the icon

The owner, in tab "My CAD Drawing", can see the document rejected and the comment

My Part	ts Parts to Appro	ve	My CAD Drawings	CAD Drawings to	A CAD Drawings to R	Electronic Compon »	
🖺 🚅	14	• -	🎫 - 🔜 🖉 🕇	7 🔮 📰 🔆	-		
Name -	•		Drawing Format	Supporting Type	Supporting Document Number	Reject Comment	State
🗌 🛗 000	0000003		-	-			Prelimin
🗌 📇 000	0000010		MEM Component	N/A			Prelimin
🗌 🗒 000	00000105		MEM Component	-			Prelimin
000	0007011		-	-			Prelimin
🗌 🛗 453	3052-A	/ing	MEM Assembly	Change Notice	E14109		Prelimin
589	97		Lab Jig	-			Prelimin
	0C-0000211					Senior Design: Check PCB content	Prelimin
🗌 🗒 L-S	SN000007366		Lab Jig	-			Prelimin
🗌 🛱 L-S	SN5897		Lab Jig	-			Prelimin
🗆 🛱 P-0	000000010		P-Lavout - D	-			Prelimin

The owner has to apply the correction (i.e. creating a new version or updating the ECAD document information) and promote again the ECAD document state to Review.

Promote from state Approved to state Publish

Tab "CAD Drawing to Release" contains ECAD document in status Approved, ready to be published by Senior Electrical Design Manager. The tab is available only to users with role Senior Electrical Design Engineer.

Version	5	Date:	12-Dec-2016	
Status	Template			194

In order to promote a drawing from state Approved to state Publish, the user can use the following functions:

- The dedicated portion in document header
- The icon contained in lifecycle toolbar
- The command contained in lifecycle menu Action

PCB Document	Review - Approved + Publish
	Owner ematthew.spiteri
	Modified : Apr 1, 2016 3:01:55 PM
Lifecycle	
DOC-0000	211 rev 00A: Lifecycle
	Go To Cancelled 🗔 🔆
二 Promote.	
🏞 Demote	Preliminary ——— Review — Z — Approved ——

Promote from state Review to state Cancelled

Electrical Design Engineer can move state drawing to Cancelled, using the dedicated command contained in Lifecycle toolbar.

Lifecycle
000000105 rev 00A: Lifecucle
=- 🛃 🗘 Go To Cancelled 💭 %-
🛋 Promote
2 Demote reliminary Review

The user has to confirm the promotion

Confirm that ECAD D	ocument has to	be Cancelled?
	ОК	Cancel

When document state is Cancelled, the document can't be moved to another state.

Version	5	Date:	12-Dec-2016	
Status	Template			195

PC	B Document	State : Cancelled Owner : matthew.spiteri Modified : Apr 1, 2016 3:05:57 PM
	Lifecycle	
	DOC-00002	211 rev OOA: Lifecycle
	= • 🗸	📫 📜 Go To Cancelled 🗔 🔆
		Preliminary — Review Approved Publish Cancelled

Version	5	Date:	12-Dec-2016	
Status	Template			196

Revisions

Change Reference

In order to create a Change Reference, different options are available in menu Actions:

- Revise without files
- Revise with all files contained in previous revision
- PCB Revise: all files contained in previous revision are copied except BOM format.



After command execution, the new document revision is created in state Preliminary

		_	
DOC-0000211 PCB Document ECAD Document (00B)	PCB Document	State : Pr Ownes : alle Modified : A	reliminary Review m pr 1, 2016 3:08:28 PM
PCB Document	≣- 🕺	A -	
Files	Name		DOC-0000211
File Versions	Revision		00B
Revisions	Туре		ECAD Document
	Moult		Opprion Draduction

The new document revision is not connected to part automatically; the users has to add manually the new revision to part, if necessary

Version	5	Date:	12-Dec-2016	
Status	Template			197

Change Notice

PCB Document CAD Document (00B) PCB Document	Owner : allen Modified : Apr 1, 2	016 3:08:28 PM	
Files		T:4-	Devicies
File Versions	Name	Title	Revision
Revisions	P DOC-0000211	PCB Document	00A
Issues	DOC-0000211	PCB Document	00B
Routes			
Lifecycle			
History			

The command allows users to view and create new document revision

Drawings can be revised with or without files from previous revision:

- CN creates a new revision without files
- CN creates a new revision with all files contained in previous revision

Users with roles Electrical Design Engineer are able to create a new revision, even if document state is Preliminary. The command creates the new revision without any interaction with user; the revision index is retrieved automatically from system.

ECAD Document (00B)	Modified : Apr 1, 2016 3:08:28 PM					
PCB Document	CN WithFile					
Files	Name	Titla		Description		
File Versions	Hume	nuc	Revision	Description		
Revisions	DOC-0000211	PCB Document	00A	PCB Docum		
Issues	DOC-0000211	PCB Document	00B	PCB Docum		
Routes	DOC-0000211	PCB Document	01C	PCB Docum		
Lifecycle						

The new document revision is not connected to part automatically; the users has to add manually the new revision to part, if necessary

Version	5	Date:	12-Dec-2016	
Status	Template			198

ENG13 Change Reference container

Purpose	Change Reference users will create Change Reference container to collect all new drawing revisions that are related to a specific new product or to a specific new tool or change	Status	Define
Stakeholders	Change Reference users		
Beginning			
Interactions	Change Reference container creation, CAD Drawing definition.		
End			
Constraints	None		

Change Reference is a container of CAD Drawings that have to be revised, as a result of any minor changes to the component or product drawing.

After Change Reference creation, users can define which drawings are to be revised. To allow this the Change Reference has to be in 'Create' state.

When the Change Reference is moved to 'Active' state, PLM will create the new revision of drawings contained only if the drawing state is 'Release'.

When all drawings contained reach the 'Release' state, the Change Reference state will be moved to 'Published'.

Version	5	Date:	12-Dec-2016	
Status	Template			199

Creation

Select Change References tab in Home Engineer Menu; select icon 'Create'

 Collaboration and Approvals 	My Parts Parts to Appr	ove Sketch to EC Part	My CAD Drawings	CAD Drawings to A Change References	CAD
Home	name rev revision: Structure	e View Filter:Active			
Home RFQ User		🚽 🖓 🔮 🧮 🔆 -			
Home Engineering User	Name 🗸	Owner		Description	State
Home Change	CRef-0000070	Steve Zahra		JLR 4-GANG X760 w/LIN - Update of drawings to	Crea
Summer: Dens	CRef-0000069	🗗 Wajdi Halawi		Adding positioning holes in the liner of the double $\ensuremath{s}\xspace\ldots$	Activ
	CRef-0000068	Steve Zahra		Included all MEM part nos in BOM.	Activ
Shortcuts	CRef-0000067	Nathan Zammit		Drawing update following design review.	Activ
Issues Summary Shortcuts	CRef-0000068	 Steve Zahra Nathan Zammit 		Included all MEM part nos in BOM. Drawing update following design review.	Activ Activ

The system will create a new Change Reference, with no drawings connected

	V.8								
Drop images here CRef-0000087 State : Create Owner : Evan S Modified : Nov 2				→ Active ngos , 2017 3:59:30	6 PM	Drop files here			
	CRef-0000087	1	•						
	History	y Name		CRef-00000)87			^	
	Lifecycle	Description							
	CAD Drawing Connected	Owner	Owner eva		evans				
	Reference Documents	Control Item		FALSE					
◀		Drawings C	onnected						
		Name	Rev	State	Туре	Revision Com	ments	_	
				No Objects Found					
		ENG: Update Assembly /	e of					~	

The table is not updated with new Change Reference; in order to update the table, the user has to refresh the table

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Status	Template			200

Change Reference management

After creation, the system opens a window with Change Reference details. The Change Reference user can alternatively select 'Change References' tab in 'Home Engineer' Menu and look for the Change Reference name

 Collaboration and Approvals 	My Parts Parts to Appr	ove Sketch to EC Part	My CAD Drawings	CAD Drawings to A	Change References	CAD Drawings to R			
Home	name rev revision: Structure View Filter.Active								
Home RFQ User	* 📮 📴 - 📰 -	J 🖓 😫 🗮 🔆 -							
Home Engineering User	Name 🗸	Owner		Description		State			
Home Change Management User	CRef-0000087	Evan Stringos				Create			

The system opens a window with Change Reference information

	¥.A								
	Drop CRef-0000087	State : Create	Active Drop files		< > 🛛 🕰 🚔				
		Modified : Nov 24	4, 2017 3:59:36 PM						
	CRef-0000087								
	History	Name	CRef-0000087		^				
	Lifecycle	Description							
	CAD Drawing Connected	Owner	evans						
	Reference Documents	Control Item							
		Drawings Connected	1						
		Name	Rev State T	/pe Revision Comments					
•		No Objects Found							
		ENG: Update of Assembly / Component Drawings as applicable		Remarks					
	ENG: Update of Design FMEA as applicable			Remarks					
		DM: Update Tool Design, Tool FMEA & Process FMEA as		Remarks	~				

The Change Reference details form is composed of three portions:

- Change Reference information
- List of drawings revised
- List of tasks to be completed

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Status	Template			201

Change Reference information and Tasks details

In order to define Change Reference information and tasks details, select icon . After the information is completed, select Done

Change Refere	nce CRef-0000	087 rev : Pr	operties		
	Fields in red	italics are required	1		^
Name	CRef-000	0087			
Description					
Owner	evans				
Control Item	FALSE	*			
Drawings Conr	nected				
Name	Rev	State	Туре	Revision Comments	
			No Objects F	ound	
ENG: Update of Assembly / Component		1	Remarks		
					Done Cancel

Version	5	Date:	12-Dec-2016	
Status	Template			202

Drawings affected

In order to define the list of drawings contained in Change Reference, select the 'CAD Drawing Connected' menu. The table shows the drawings that are contained in Change Reference container.



The toolbar contains an 'Actions' menu with three commands:

Allows users to add CAD Drawings to Change Reference container
Allows users to remove CAD Drawings to Change Reference container
Allows users to edit the Revision Comments for new CAD Drawing revision

In order to define the CAD Drawings contained in Change Reference, select icon ; the system opens a new window to query CAD Drawings.

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Status	Template			203

The user has to select CAD Drawings to be revised and select Submit

Search Refinement			Search Results: 100, 2 selected									
Search Q 2			E 🔹 - 📰 -	⊵ 💁 - 📪 - 📰 - 💭 ኛ 🗮 🇞 -								
Case Sensitive			□ Name ▲		Rev	Туре	Description	State		Þ		
Limit to 100 results			00000245-C		00A	쁞CAD Dr	JX7B-19B514-BA	Publish		۲		
Description		^	00000641-C		00A	CAD Dr	JPLA-14D340-BB	Publish		ſ		
			D0000790-A		00B	₿CAD Dr…		Publish		ι		
Policy			00000856-A		00B	CAD Dr		Publish		ſ		
MEM Drawing				00005351		00A	₿CAD Dr…		Approve	d	ſ	
04-4-	\sim	- (0005685		00A	₿CAD Dr	Cover	Approve	d	ſ		
State			00005754		00A	₿CAD Dr…	Full PCB Assy Olivibra	Approve	d	ſ		
	Ø		0006230		00A	CAD Dr…	Bare Board	Review		t		
Originated			00006425-A		00A	₿CAD Dr…	Neutral Corporate Switch	Approve	d	ſ		
			00006504-C		00A	₿CAD Dr	KY63-13D730-A, KY63-13	Review		٤.		
	2		<	>	<			-	-			
Title		~							Submi	it		

The table 'CAD Drawing Connected' is then updated

Drop Images here CRef-0000087	State : Create + Active Owner : Evan Stringos Modified : Nov 24, 2017 3:5	9:36 PN	Drop files here				•
CRef-0000087	Actions -	.	• 🗊 💭 두 📰 י	7 🗏 🔆 -			
History	□ Name ▲	Rev	State	Туре	Revision Comments	Actions	E
CAD Drawing Connected	🗆 🛱 00005685	00A	Approved	MEM Drawing		▶ 🛓	đ
Reference Documents	🗆 🛱 00006230	00A	Review	MEM Drawing		2	đ

Also the CAD Drawings list contained in the main form is also updated

CRef-0000087		⅔-								
History	Name		CRef-000	0087						^
Lifecycle	Descrip	tion								
CAD Drawing Connected	CAD Drawing Connected Owner									
Reference Documents	Control	ltem	FALSE							
	Drawing	gs Connected								
	Nan	le	Rev	State	Туре		Revision	Comments		
	🖺 0	0006230	00A	Review	MEM	Drawing			Ē	
	🖺 0	0005685	00A	Approved	MEM	Drawing			Ð	
	ENG: U Assemb Compor Drawing applicat	odate of Ny / nent is as ole				Remarks				
Version		5			Date:			12-Dec-2016		
Status Template			e							204

To remove CAD Drawings contained in Change Reference, select the drawings from 'CAD Drawing Connected'



CRef-0000003	ce Owner : matthew.spiteri Modified : May 19, 2016 11:21	58 AM	
CRef-0000003	💽 🔁 📮 - 🔲 🖬 - 📰	•	2 7 🔳
History	Name 🔺	Rev	State
CAD Drawing Connected	00001590 <u>00001590</u>	00B	Preliminary
	00001666	01B	Preliminary

The user has to confirm the task; if a new drawing has been created, the user has to delete it manually from the database

-	You have chosen to remove the selected items from this list. Removing an item from a list does not delete the item from the database. To continue with the removal, click OK. To cancel the removal, click Cancel. If a new drawing contained has been created, don't forget to delete it from database	nen
	OK Annulla	

In order edit the Revision Comments, select icon ; when completed, select Save

Drawing Connected								
Name 🔺	Rev	State	Туре	Revision Comments				
健 00005685	A00	Approved	MEM Drawing	Update button notes				

Version	5	Date:	12-Dec-2016	
Status	Template			205

Lifecycle

Change Reference lifecycle is composed by 5 states:



The Change Reference User can create a Change Reference and can promote the Change Reference from 'Create' state to 'Active' state (or demote back to 'Create' state). When the Change Reference is promoted to 'Active' state, all 'Preliminary' drawings connected are revised

In order to move to next state, the user can use the dedicate icons in Lifecycle toolbar

CRef-0000087	Lifecycle
History	CRef-0000087 rev : Lifecycle
Lifecycle	
CAD Drawing Connected	
Reference Documents	Create → Active → Published → Archive → Cancel

User can use also the dedicate icons contained in header

CRef-0000003	Create - Active - Archive
here Change Referen	ce Owner : matthew.spiteri
L	Modified : May 19, 2010 1.49:16 PM
CRef-0000003	Lifecycle
History	CRef-0000003 rev : Lifecycle
Lifecycle	

In order to cancel the Change Reference, the user can use the dedicated function contained in the toolbar



During the promotion from 'Create' state to 'Active' state, the system checks if all mandatory fields are entered.

)	Notice: The following attributes are mandatory: description ENG: Update of Assembly / Component Drawings as applicable ENG: Update of Design FMEA as applicable DM: Update Tool Design, Tool FMEA & Process FMEA as applicable CAL: Update of Gauge Drawings as applicable DJ: Update Assembly Design, Process FMEA as applicable DJ: Update Process Layout //Material Flow Chart as applicable MA/TPM/IGD: Update Quality Control Plans and Attribute Charts as applicable Purchasing: send updates to Supplier	
	ОК	

After the Change Reference promotion, all drawings connected 'Publish' state are revised.

Before promotion

	Drop images here CRef-0000087	ence	State : Create → Active Owner : Evan Stringos Modified : Nov 24, 2017 5:0	9:46 PN	Droj files here	p s	$\langle \rangle$
	CRef-0000087	Act	tions -	•	•	, 🚺	7 🏾 🔆 -
	History		lame 🔺	Rev	State	Туре	Revision Comme
	Lifecycle		40005				
	CAD Drawing Connected		<u>4</u> 13605	00D	Publish	MEM	
	Reference Documents		<u>14860</u>	00C	Publish	MEM	
•							

Version	5	Date:	12-Dec-2016	
Status	Template			207

After promotion

	Drop images here CRef-0000087	ence	State : Create Owner : Evan S Modified : Nov	← A Stringos 24, 201	ctive 7 5:09:46 PM	Drop files here	
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To add a new drawing that needs to be revised after the user promotes the CRef to 'Active' state, the CRef needs to be demoted to 'Create' state, add the drawing and promote the CRef back to 'Active' state. Connected drawings will not be revised unless they are in 'Publish' state.

The CRef cannot be promoted to 'Published' state by the users; an automatic trigger promotes the CRef to 'Published' state only after all drawings contained in the created CRef is promoted to 'Publish' state. The functions 'Promote' and 'Demote' (enabled only when at least a drawing is selected) are available in the "CAD Drawing Connected" toolbar, to facilitate the promotion of the drawing from 'Preliminary' state to 'Review' state. Also, the Actions icons could be used by users to upload or download attachments to CAD Drawings container.

	Drop Images here CRef-0000070	JLR 4-GANG X760 w/LIN - Update of drawings to get parts	FOT	State : Create + Active Owner : Steve Zahra Modified : Oct 5, 2017 3:52:07	PM			3
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When the CRef is 'Published', an email generated by the PLM notifies the CRef owner and stakeholders.

Version	5	Date:	12-Dec-2016	
Status	Template			208