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<b>Date</b>	11 January 2013	<b>Ref</b>	TEC-QT/2012/335/CV
<b>From</b>	Carole Villette	<b>Visa</b>	T. Ghidini, M. Nikulainen
<b>To</b>	ESA PA Managers,	<b>Copy</b>	TEC-Q, TEC-QT, TEC-QTC, TEC-QTM, TEC-QQM, TEC-QE, ESA Skills Training Managers, CNES
<b>Subject:</b>	<b>Verification to ECSS-Q-ST-70-38C. Status of Surface Mount technology (SMT) as of January 2013</b>		

Please find hereafter the current update of the assembly approval status as per ECSS-Q-ST-70-38C of the Companies which have submitted their application to ESA. The verification of a Company is not a general approval, but relates uniquely to the materials (i.e. Type of PCB laminate, type of solder, type of conformal coating, etc.) to the precise types of components/packages and to the design of the foot print that were subjected to the verification programme performed in accordance to the ECSS-Q-ST-70-38C. Each Summary Table has a unique QM or TEC/QT reference number which should be identified in the relevant ESA Project's Declared Process List.

It is under the responsibility of the Company to ensure that all devices and configurations being assembled on the Printed Circuit Boards are in the ESA Approved Summary Tables and that no changes have been made.

It is usual to have a running verification programme with a Company due to change in the processes, materials, vibration levels or presence of new devices.

The status of the Companies varies frequently and therefore an updated letter will be issued every 3 months and can be found on the esmat website (<http://esmat.esa.int/Databases/SMTLetter.pdf>).

Thirty five Companies have currently verified lines, forty are presently involved in verification or delta verification programme, and some have expressed an interest to become verified.



C. Villette  
Materials Technology Section

Reference of the letter	Change log
TEC- QT/2012/335/CV	<p>-EADS AST-Stevenage: Change of contact person. Simon Dackham replaced by Philip Reece.</p> <p>-EADS AST-Stevenage: Assembly of SMT stopped.</p> <p>-EADS Astrium Crisa: New ESA Approved Summary Tables (TEC-QT/2012/75 tables 1 to 4 and TEC-QT/2012/77/CV Tables 1 and 2). Selective Wave Soldering new Summary ATbles to be approved.</p> <p>-EADS AST FDH: Change of contact person. Diana Pueyo replaced by Chiara Mealli</p> <p>-EADS AST OTN: Change of contact person. Diana Pueyo replaced by Friedrich Koberlin</p> <p>-EADS AST PTH: Change of contact person. Simon Dackham replaced by Philip Reece</p> <p>-MEL: Reports of delta verification reviewed and Summary Tables to be received for Approval.</p> <p>-Mier Comunicaciones: New programme verification to start due to procurement of new soldering machine.</p> <p>-Patria Aviation: New Summary Tables to be received for review</p> <p>-Rakon: New delta verification has started in the frame of EDRS.</p>

	<ul style="list-style-type: none"><li>-RESA: Delta verification programme on-going with Rakon</li> <li>-RSE: New verification programme completed on selective wave soldering.</li> <li>-RSE: Nw verification programme to start for the procurement of new reflow machine.</li> <li>-Selex Galileo Avionica: Name has been changed by Selex Galileo ES.</li> <li>-Sodern: Change of name of the company: EADS Sodern replaced by Sodern.</li> <li>-Sodern: Start of a new verification programme due to new process.</li> <li>-Syderal: Delta verification started in the frame of earth care.</li> <li>-Tecnobit: ESA Summary Tables to be received for Approval.</li> <li>-Teast Spacecom: New ESA Approved Summary Table (TEC- QT/2012/136/CV )</li> <li>-Thales Alenia Espana: New delta verification started in the frame of MTG</li> <li>-Thales Alenia Space Toulouse: Assembly reports to be reviewed by ESA</li> <li>-Thales Alenia Space ETCA: New ESA Approved Summary Tables (TEC-QT/2012/47/CV Tables 1 and 2)</li> <li>-Thales Alenia Space ETCA: New verification programme has started for PPU and PSU (Artes programmes)</li> <li>-Thales Alenia Space Milan: Assembly line moved to Thales Alenia Space L' Aquila</li></ul>
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	<p>-Thales Alenia Space L' Aquila: New verification programme started in the frame of the move of Milan plant.</p>
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<b>COMPANY</b>	<b>Contact person</b>	<b>e-mail address</b>	<b>LOCATION</b>	<b>ESA reference for info notes, Approved Summary Table and date (or other situation)</b>
ASP	Mr. Gunther Neumann	g.neumann@asp-equipment.de	Oberwiesen 16 88682 Salem Germany	Request for verification programme letter dated on 23.09.2011 performed in the frame of a GSTP.
Blueelectronic	Mr V. Tordiglione	terry.stock@blueelectronic.it, valentino.tordiglione@blueelectronic.it	Desio (It)	Info Note TEC-QT/2009/1097/CV. Ongoing verification in the frame of sentinel 1-
BRADFORD ENG.	Mr. E. Van der Kroon, Ms. C. Rowinski	e.vanderkroon@bradford-space.com c.rowinski@bradford-space.com	Heerle (NL)	TEC-QT/2009/1039/CV Table 1. New verification programme has started in the frame of Bepi Colombo, S2, Earth-care.
CGS	Mr. E. Della Nave	slegramandi@cgspace.it	Milan (I)	QM/02-440, Table 1 and 2 dated on 31 January 2002. New verification programme started in the frame of Small Geo.

<b>COMPANY</b>	<b>Contact person</b>	<b>e-mail address</b>	<b>LOCATION</b>	<b>ESA reference for info notes, Approved Summary Table and date (or other situation)</b>
CODECHAMP	Mrs. Martine Tabard	m.tabard@codechamp.fr	Champagnat (F)	QM/95J402, Table 1, 3 Oct. 95. New verification started in the frame of MTG. .
COMDEV-Europe	Andrew Spencer	Andrew.Spencer@comdev.co.uk	Aylesbury (UK)	Verification actually on going in the frame of @sat.
CSRC	Marek Simka	marek.simcak@csrc.cz	Kromeriz (CZ)	Start a verification programme in the frame of ESA contract.
DAS Photonics	O. Navasquillo	olga.navasquillo@dasphotonics.com	Valencia (E)	Info Note QT/09-1027/CV. Verification programme initiated in the frame of @sat project. Verification completed. ESA Summary Table to be provided for approval.. New verification to be started in the frame of a GSTP.

<b>COMPANY</b>	<b>Contact person</b>	<b>e-mail address</b>	<b>LOCATION</b>	<b>ESA reference for info notes, Approved Summary Table and date (or other situation)</b>
EADS-ASTRIUM Stevenage (MMS-UK)	Mr. Ph. Reece	Philip.reece@astrium.eads.net	Stevenage (GB)	Assembly of SMT has stopped in the plant.
EADS-ASTRIUM Bremen	Mr. P. Scheffers	Peter.Scheffers@astrium.eads.net	Bremen (D)	QM/03-063/BD Tables 1-3 of 20 January 2003. Change of reflow machine. New verification programme on going in the frame of ATV.
EADS-ASTRIUM CRISA	Mr. F. Gracia	FernandoP.Gracia@astrium.eads.net	Tres Cantos (E)	TEC-QT/2009/1060/CV Table 1, 2,3 and 4. TEC-QT/2011/26/CV tables 1,2,3 and 4. TEC-QT-2011-120/CV Tables 1 to 4 dated on 2nd December 2011. TEC-QT/2012/77/CV tables 1 and 2 dated on 2nd of October 2012. TEC-QT/2012/75/CV Tables 1 to 4 dated on 2nd of October 2012. New Summary table to be provided for Approval of SWS.

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EADS-ASTRIUM Friedrichshafen (Dasa-FN, Dornier)	Ms. Chiara Mealli	Chiara.Mealli@astrium.eads.net	Friedrichshafen (D)	QM/97B66, Tables 1 – 6, of April 2000. Delta verification programme completed in the frame of S2. New ESA Summary Table to be signed.
EADS-ASTRIUM Ottobrunn (Dasa-OTN)	Mr. Friedrich Koberlin	Friedrich.koeblerlin@astrium.eads.net	Ottobrunn (D)	QM/08-1001/CV table 1 to 10 dated on 10 december 2008. New verification programme completed. New ESA Summary Table to be signed.
EADS-ASTRIUM Portsmouth (MMS-UK)	Mr. P. Reece	Philip.reece@astrium.eads.net	Portsmouth (GB)	QM/05-210/BD, Tables 1 –7, of 8 August 2005. Shall start a new verification in the frame of EDRS
EADS-ASTRIUM Elancourt (matra, MMS-F, Velizy)	Mrs. Veronique Deschamps Benoit	veronique.deschampsbenoit@astrium.eads.net	Elancourt (F)	QM/03-062/BD, Tables 1-3 of 20 February 2003. Successful audit of the new manufacturing line TEC-QT/2009/1137/CV. Completed delta verification in the frame of Seosat. TEC-QT/2012/20/CV Tables 1 to 5 dated on



<b>COMPANY</b>	<b>Contact person</b>	<b>e-mail address</b>	<b>LOCATION</b>	<b>ESA reference for info notes, Approved Summary Table and date (or other situation)</b>
				25/07/2012.
EFACEC	Maria João Pato,	maria.joao.pato@efacec.pt	Moreira Maia(P)	Info note QT/09-1011/CV. Approval exercise initiated in the frame of @sat project. New delta verification initiated in the frame of Bepi Colombo.
ETEL	Mr. V. Schorer		Motiers (CH)	QMM/98I179/BD, Table 1 and 2 of 17 Sept. 98, QM/01-327/BD Table 3 of 28 Nov. 01
Hitech Elettronica	Mr. Piombini	vincenzo.piombini@hitechelettronica.it	L'Aquila (I)	Info note QM-06-433/CV . Hitek Elettronica is manufacturing for TAS L'Aquila. Approval status to be reviewed.
Institut fur Weltraumforschung (OEAW)	Mr. M. Steller	Manfred.Steller@oeaw.ac.at	Graz (Au)	Verification to start in the frame of Bepi-Colombo.

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JENOPTIK (Dasa-Jenoptik)	Mr. R. Hunger	Ronald.hunger@jena-optronik.de	Jena (D)	QM/98F97/BD, Table 1, of 3 June 1998. Delta verification in the frame of @sat and Small Geo completed. Delta verification for S2 and S3 completed. Summary Table to be received. New verification programme started in the frame of a GSTP.
KAYSER THREDE	Mr. H. Meinl	heribert.meinl@kayser-threde.com	Kayser-Threde GmbH (D)	QMM/98J204/BD. Table 1, of 14 Oct. 98. Audit of the manufacturing line identified a major Non Conformance (TEC-QT/2010/63/CV). New verification programme started in the frame of Aces (microgravity) for the use of a new reflow machine.
LusoSpace	Mrs. C. Felix	CFelix@lusospace.com	Lisbon (P)	Preliminary meeting QM/08-935/CV. Verification having starting in the frame of sentinel programmes. Successful verification. Summary Table to be received and Approved.

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Max Planck Institut	M Ivor Krause	krausei@mps.mpg.de	Katenburg-Lindau (D)	Info note TEC-QT/2009/1079/CV. No news from the company.
MEL	Mr. F. Renault	frederic.renaut@matra-electronique.fr	La croix St Ouen (Fr)	TEC-QT/2011/18/CV tables 1 and 2. New delta verification programme completed in the frame of BC. Reports have been reviewed and Summary Tables to be received for Approval.
MIER COMUNICACIONES	Mrs. A. Collado	acollado@mier.es	Barcelona (E)	QM/06-416/BD table 1,2,3 dated on the 2 May 2006. On going delta verification in the frame of Small Geo, Galileo. Audit and Summary Tables to be reviewed prior to approval. New verification programme to be started due to procurement of machine soldering.
Montena EMC	Mr. W Hirschi	Werner.hirschi@montena.com	Rossens (CH)	QT/09-1016/CV Table 1 and 2

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NORSPACE (Amespace and Alcatel Norway)	Mr . Stian Lerdahl	stian.lerdahl@norspace.no	Horten (N)	QM/2000H122, Table 1, 29/08/2000. Completed delta verification. Summary Table to be received for Approval.
NTE-Sener SA	Mrs. E. Creus	eva.creus@nte-sener.es	Barcelona (E)	QM/05-246/BD Table 1. On going delta verification in the frame of Seosat.
OHB SYSTEMS	Mr. A. Hein	hein@ohb-system.de	Bremen (D)	QM/02-402, Table 1, of 3 January 2002. Delta verification in the frame of Galileo FOC completed. Delta verification completed. Summary Tables to be received for review prior to Approval.
PATRIA Aviation	Mr. jens Lundell	Jens.lundell@patria.fi	Tampere (Fi)	QM/05-309/BD Table 1 and Table 2, December 2005. completed delta verification in the frame of Bepi Colombo and S2. New Summary tables to be received for review and approval.

<b>COMPANY</b>	<b>Contact person</b>	<b>e-mail address</b>	<b>LOCATION</b>	<b>ESA reference for info notes, Approved Summary Table and date (or other situation)</b>
Rakon (C-MAC)	Mrs. F. Puigsech	francine.puigsech@rakon.com	Argenteuil (F)	QM/95J458, Table 1 of 31 October 1995, Table 2, of 2 January 1996
Rakon	Ms. C. Cagnard  Mr. F. Maillard	carole.gagnard@rakon.com  Frederick.maillard@rakon.com	Pont St. Marie (F)	Info Note sent on 24 July 2003 (ref. QM/03-165/CV). Verification programme on going. Microsections and report under preparation. New delta verification programme has started in the frame of EDRS.
RESA	Thierry Reboul	thierry.reboul@resa-spatiales.fr	Courtaboeuf (F)	ESA Approved Summary Table to be signed ESA Approved as Subcontractor of Sodern: TEC-QT/2011/46/CV tables 1 and 2. Completed verification programme as subcontractor of Codechamp (MTG). Delta verification programme on going with Rakon.
Ruag Space Austria	Mr. G. Guttler	gerd.guettler@ruag.com	Vienna (A)	QM/05-057/BD table 1 to 4 of 4th March 2005. Verification programme completed in the frame of

COMPANY	Contact person	e-mail address	LOCATION	ESA reference for info notes, Approved Summary Table and date (or other situation)
				<p>Swarm. Summary Tables to be received for review and approval.            New delta verification in the frame of S2 and S3 completed.            New delta verification to be started.</p>
Ruag Space Sweden (RSE)	Per Allard	per.allard@ruag.com	Gothenburg (S)	<p>QM/03-270, Tables 1-5, of 11 November 2003.            Running delta verification in the frame of Sentinels. New Summary Table to be approved.</p> <p>New verification programme completed on the selective wave soldering.</p> <p>New verification programme to start for the procurement of a new machine reflow.</p>
SABCA	Mr. P. Lenelle	pierre.lenelle@abca.be	Brussels (B)	<p>Info Note QM/05-079/CV sent on 23 March 2005. Verification campaign completed in the frame of Vega.            Summary Table to be</p>

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				received and Approved.
SAGEM (previously Alcatel Valence and sextant)	Mr. S. Blache	stephane.blache@sagem.com or pierre.pillet@sagem.com	Valence (F)	QM/02-517/BD Table 1, April 2002
SEA	Mr. K. Ward	Ken.Ward@sea.co.uk	Bristol (UK)	Info Note sent on 12 Jan. 01. Request letter 17/03/2008 ref: SEA/08/KWW/FF2N186 o Internal ref: QM/08-958/MN/MH. Verification programme actually running in the frame of Earth-care. New verification programme performed in the frame of BC.
Selex Galileo Avionica (Fiar, Officine Galileo)	Ms. Luca Vallini	Luca.vallini@sel.exgalileo.com	Nerviano (I)	QMM/99A06/BD, Tables 1 & 2, 3 January 1999. Audit of the new manufacturing line after the move to Nerviano (TEC-QT/2011/47/CV) considered conditionally suitable. New verification to be performed in order

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				to have a compliant summary table with respect to populated boards as actually the assembly of many devices are not ESA Approved.
Selex Galileo ES (former Selex Galileo Avionica and Galileo Avionica)	Mr. G. Morelli	gianfranco.morelli@selex-es.com	Firenze (I)	QM/02-632/Tables 1-5, 17 October 2002. TEC-QT/2009/1132/CV Tables 1,2, 3 and 4 New verification programme has started in 2012 as the assembly of many devices is not actually covered by the ESA Approved Summary Table. Involved project (BC, Euclide, @bus extension, exomars and S3.
SENER	Mr. Luis Fernando Sanchez	luis.sanchez@senner.es	Tres Cantos (E)	Verification programme completed in the frame of Bepi Colombo and S3. Delta verification completed in 2012 to implement corrective actions.
Sitael former	Mr. G. Vitale	giuseppe.vitale@sitael.com	Pisa (I)	Request letter 24/06/2008 ref: QM/08-917/CV for a verification



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CAEN				programme to start in the frame of S3. Summary Tables to be signed providing closure of actions. Verification programme to start in the frame of earth care.
SODERN	Mr. M. Grieu	marc.grieu@sodern.fr	Limeil-Brevannes (F)	ESA Approved Summary table: QM/08-968/CV tables 1 and 2. TEC-QT/2011/46/CV Tables 1 and 2 dated on 15 April 2011. Has started a new verification programme due to new process.
SPUR ELECTRON	Mr. I. Turner  Mrs. C. barnes	ITurner@spurelectron.com  cbarnes@spurelectron.com	Havant (GB)	1/ ESA Approved Summary Table: QM/07-748/BD table 1 to 4. 2/ ESA Approved Summary Table: QM/06-520/BD table 1 to 4. 3/ Delta verification started in the frame of @sat (Comdev), Galileo FOC(Ruag switzerland), 4/ New delta verification started in the frame of earth care (SEA, SSTL) 5/ New delta verification started in the frame of S3 (CRS)

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				6/ New delta verification started in the frame of Galileo (SG Firenze) 7/ New delta verification started in the frame of BC (SEA).
Steel Electronique	Mrs. Ch. Magisson	<christelle.magisson@steel-electronique.fr>	Martres Tolosanes (F)	QM/06-573/CV Info note sent the 18-12-2006. Verification programme completed in the frame of Swarm. TEC-QT/2011/200/CV tables 1 and 2 . TEC-QT/2011/202/CV table 1
SURREY SATELLITE TECHNOLOGY LTD.	Mr. M. Cook	M.Cook@sstl.co.uk	Guildford (GB)	Started a verification programme in the frame of Galileo RTU.
SYDERAL (Alcatel Space Switzerland and CIR)	M Glenn Symons, Mr. F. Perrin	Glenn.symons@syderal.ch, Frederic.perrin@syderal.ch	Gals (CH)	QM/96J487, Table 1, 28 Oct. 96, Tables 2-5, 16 Nov. 97; Table 6, 12 July 99; Tables 7-8, 12 Feb.01; Table 9, 20 February 2003. Verification programme made for the VP oven completed . Summary Table to be received and

COMPANY	Contact person	e-mail address	LOCATION	ESA reference for info notes, Approved Summary Table and date (or other situation)
				approved. Delta verifications started in 2012 in the frame of earth care.
TECNOBIT	Raul Martinez Sanchez	raul.martinez@tecnobit.es	Fudre, 18-13300 Valdepenas-Ciudad Real-(E)	Info Note TEC-QT/2010/26/CV dated on 13/04/2010. Verification programme initiated in the frame of Small Geo. Delta verification initiated and completed for corrective actions. ESA Summary Tables to be received for Approval.
TECNOTRON	Mr. J. Birkenfeld	jbirkenfeld@tecnotron.de	Weissenberg (D)	Info Note sent on 11 September 2003 (ref. QM/03-203/BD/GDK) Review of status on hold due to absence of ESA project request. No ESA Approval granted.
TERMA	Mr. K. Plauborg	KP@terma.com	Lystrup (DK)	QM/2000H123, Table 1 and 2, of 29 Aug. 00 and Table 3 of 24 Oct. 00. Delta verification completed. Summary tables to be received for

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				approval.
TESAT Spacecom (ANT/Bosch)	Mr. Henry Heidemeyer	henry.heidemeyer@tesat.de	Backnang (D)	QM/01-121, Table 1, 26 April 2001. TEC-QT/2012/136/CV dated on 19/12/2012
Thales Alenia Space Espana	Angel Fernandez Gonzalvo	Angel.Fernandez_Gonzalvo@thalesaleniaspace.com	Tres Cantos (E)	QM/03-078/BD, Tables 1-8, 12/03/2003. Delta verification programme completed in the frame of S1. Summary Table under preparation to be provided by TAS-E. New delta verification programme started in the frame of MTG.
Thales Alenia Space Toulouse	Mr. J.P. Bessaguet	jean-pierre.bessaguet@thalesaleniaspace.com	Toulouse (F)	QM/01-348/BD, Tables 1 to 8 TEC-QT/2011/198 Table 1 to 11. TEC-QT/2011/198/CV tables 1 to 12 dated on 1st december 2011. Assembly reports to be reviewed by ESA in the frame of the CNES ASF renewal.

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Thales Alenia Space-ETCA	Mr. L. Cantagallo	luigi.cantagallo@thalesalieniaspace.com	Charleroi (B)	QM/06-464/BD Table 1 of 24 July 2006. TEC-QT/2012/47 Tables 1 and 2 dated on 14th of September 2012. New verification has started in 2012 for PPU (Artes 8) and PSU (Artes)
Thales Alenia-Space Milan (former Laben)	Mr. Mazzotti- E. Limoncelli	elio.limoncelli@thalesalieniaspace.com	Milan (I)	QM/03-083/BD; Tables 1-7, of 20 March 2003 and for Hybrid assembly; Table 8, of 28 November 2003. Delta verification programme completed and report to be provided. New delta verification programme initiated in the frame of S3. New verification to be started in the frame of MTG. Assembly line to be moved to TAS L'Aquila which will require verification programme.
Thales Alenia SPAZIO	Mr. L. Sollecchia	Luca.Sollecchia@thalesalieniaspace.com	L'Aquila (I)	Approval status QM/03-290/BD, Tables 1- to 5 of 28 November 2003. Delta verification programme completed.

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				Reports to be reviewed. Assembly performed by Hitech Electronica. New verification programme has started in the frame of the move of Milan facility to L' Aquila. Batch 1 verification completed. Batch 1 with new equipment procured in Plant 1.
Thales Systeme Aeroportes	Mr. P Wattier	patrice.wattier@fr.thalesgroup.com	Elancourt (F)	QM/05-217/BD Info note. QM/07-738 Table1 and Table 2 dated on 20 August 2007. Delta verification started and completed in the frame of S3.
University of Birmingham	David Hoyland	dh@star.sr.bham.ac.uk	Edgbaston (UK)	Audit made the 2/02/2006 (QM/06-340). Verification programme completed in the frame of LPF. Summary Table to be received and signed.
Vectron	Torsten Kirschner	kirschner@vectron.com	Postdamer (D)	Request letter dated on 12/12/2012. No actual support from project.

