

Concept of a Test Management System Based on Lessons Learned from ATV Test Campaigns

Workshop on Simulation for European Space Programmes (SESP)

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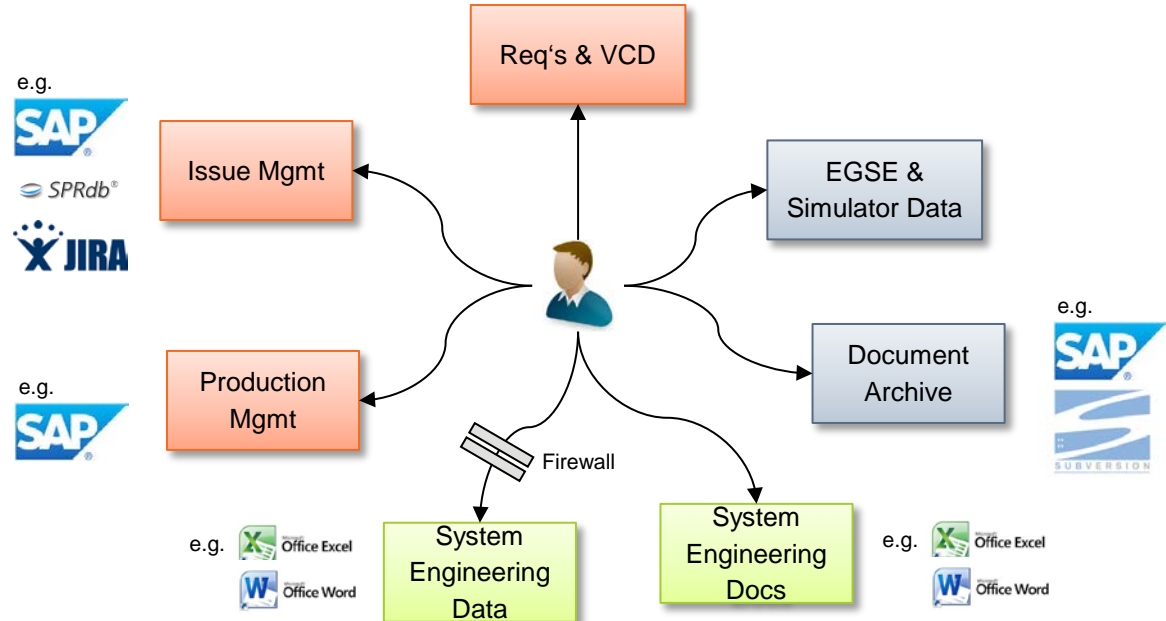
Table of Content

- The problem statement: Need to access many different systems
- The wanted solution
- The ATV Semantic Wiki Solution
- ATV Test Wiki – Sample Functions
- The MediaWiki Technology
- Lessons Learned
- Conclusion

The problem statement: Need to access many different systems

ATV Integration & Test Team needs to access many different systems to perform the assembly and integration activities, like:

- Documentation systems without AIT/AIV context search
- System Engineering data without AIT/AIV links
- System requirements & VCD not linked with test procedure execution
- Issue Management & ABCL data with no context search functions
- Data from EGSE & Simulators not linked with test executions



This is inefficient, error-prone and does not allow for automation

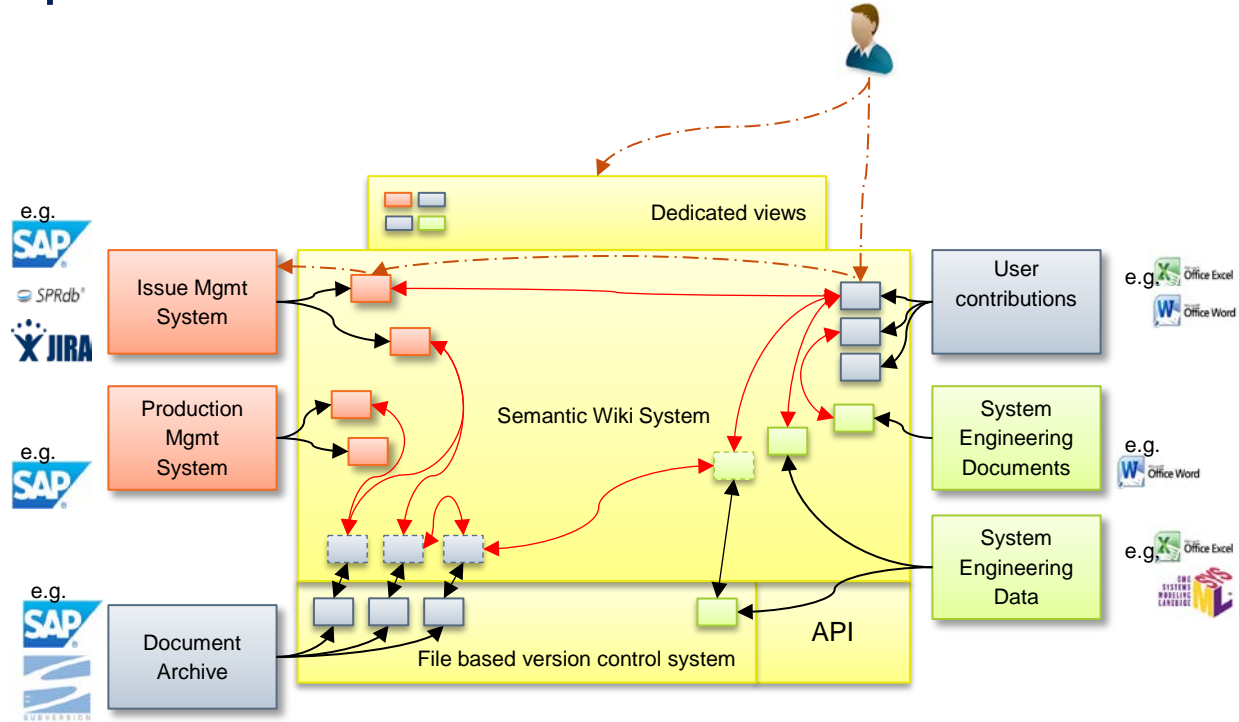
The wanted solution

- Common Test Collaboration platform for the distributed AIT/AIV teams performing and supporting tests at various places in Europe: Bremen, Les Mureaux, Toulouse, Noordwijk and Kourou
- Efficient access to the latest ATV engineering documentation and data: Specifications, Design Descriptions, Interface Definitions, Harness and as-built configuration data, Issue Tracking system, etc
- Test Management Tools to support test planning, preparation, execution, evaluation and reporting
- Single access point (the ATV Wiki) to the data and documents to perform the AIT and ATV tasks

--> **The ATV Semantic Wiki Solution**

ATV Test Wiki concept

- The semantic Wiki acts as the central collector and dispatcher of data & information from / to different systems
- Data from external systems is imported as Wiki pages with meta data & links
- Documents & data files are linked through APIs with the Wiki system
- System Engineering documents and data are embedded in the Wiki in navigation pages and attached documents and files
- User contributions as shift reports are integrated into the Wiki
- User access through dedicated views derived from queries in the Wiki based on data, relations and roles



ATV Test Wiki – Sample Functions

Examples of ATV Test Wiki pages are presented on the next slides:

- Personal Dashboard
- Flight Model focussed Dashboard
- Single Procedure Execution
- Shift Report
- Single Non Conformance report (NCR, QM)
- Online Test Session
- Linked access to ATV System Engineering information
- STE Management
- Campaign Management

Personal Dashboard

Dashboard based on user assigned roles e.g. „Functional Unit Responsible“ – here responsible for the GMS (GNC Measurement System) of Flight Model 4 (FM4)

Dashboards contains:

- The unfinished procedure executions for which he is responsible
- The latest 10 NCRs related to this subsystem (including status, procedure reference, etc.)
- The latest 10 procedure executions under his responsibility including execution run identifier, Flight Model, Operators, date, link to procedure, duration, status, and links to NCRs if applicable

Unfinished procedure executions I was responsible for

QM ID	Has title	Has been raised on	Has been modified on	Has QM status	Has parent
QM200052966	CSG:EL-DPS-12 manchester error	2014-05-07	2014-05-09	Meldung in Arbeit	ATV-E-EL-DPS-012 0017 ATV-E-SYS-090 0007
QM200050678	GMS-040, Check failed, moon present	2013-08-16	2013-11-29	Meldung in Arbeit	ATV-E-EL-GMS-040 0012
QM200050527	Particles found on mirror in TGM2	2013-07-29	2013-11-12	Meldung abgeschlossen	ATV-E-EL-GMS-022 0004
QM200050519	NCR Mount rings VDM are too close togeth	2013-07-29	2013-11-29	Meldung in Arbeit	ATV-E-EL-GMS-022 0004
QM200050522	GMS-005: A RID was unexpected	2013-07-26	2013-11-29	Meldung in Arbeit	ATV-E-EL-GMS-005 0006
QM200049742	EL-GMS-013: GYRA NOT IN COARSE MODE	2013-04-29	2013-05-06	Meldung in Arbeit	ATV-E-EL-GMS-013 0010
QM200049678	EL-GMS-003: Check failed: watchdog alarm	2013-04-24	2013-05-02	Meldung abgeschlossen	ATV-E-EL-GMS-003 0012
QM200049698	SYS-001 MILBUS error low wordcount	2013-04-24	2013-04-29	Meldung in Arbeit	ATV-E-EL-GMS-003 0012
QM200049701	DPS-003 TGM2/STR1 dump check failed	2013-04-24	2013-05-06	Meldung in Arbeit	ATV-E-EL-GMS-003 0012
QM200049677	E-SYS-001: Switch-on ATV on EGSE failed	2013-04-24	2013-05-06	Meldung in Arbeit	ATV-E-EL-GMS-003 0012

Last 10 procedure executions I was responsible for

Model	Operator	Date	Procedure	Duration	Completion status	Operator status	Status	FAUF	QM(s)
ATV-E-EL-DPS-014 0009	FM4 Kluck, Markus Schmidt, Ulf-Esdert	26 July 2014	ATV-E-EL-DPS-014	1.73	Completely performed	OK	Finished	FAUF100127331	QM200053616
ATV-E-EL-GMS-021 0004	FM4 Kamdoun, Rodrigue Kluck, Markus	15 July 2014	ATV-E-EL-GMS-021	0.98	Completely performed	OK	Finished	FAUF100127227	
ATV-E-EL-GMS-020 0004	FM4 Kamdoun, Rodrigue Kluck, Markus	15 July 2014	ATV-E-EL-GMS-020	1.53	Completely performed	OK	Finished	FAUF100127227	QM200053522
ATV-E-SYS-040 0004	FM4 Kamdoun, Rodrigue Heim,	10 July 2014	ATV-E-SYS-040	1.58	Completely performed	OK	Finished	FAUF100127227	

Note: NCRs and procedure executions are enriched with meta data like. raised on, modified on, parent of, Operator, Duration, completion status, etc

Flight Model focused Dashboard

Procedure Summary for one Flight Model (ATV 2, ATV 3, ATV 4 or ATV 5):

- allows to dig in into any detail of the executed or planned test activities
- Currently active procedures
- Procedure executions still in post processing
- Engineering post processing
- Last 15 procedures performed

The dashboard provides a comprehensive overview of procedure execution. It includes a navigation sidebar, a search bar, and a main content area with several sections:

- Contents [hide]**: A list of five categories: 1 Currently active procedures, 2 Procedure Executions still in Postprocessing, 3 ENG Postprocessing, 4 Last 15 Procedures performed, and 5 Upcoming test activities.
- Currently active procedures**: A table with columns: Date(s), Procedure, Issue, Title, Model, Parent, QM(s), Duration, Status, Customer delivery, and ENG pp finished.
- Procedure Executions still in Postprocessing**: A table with the same columns as above.
- ENG Postprocessing**: A table with the same columns as above.
- Last 15 Procedures performed**: A table with columns: Date(s), Procedure, Issue Title, Model Parent, QM(s), Duration Status, Customer delivery, and ENG pp finished. This table includes detailed rows for specific procedures.

Example data from the 'Last 15 Procedures performed' table:

Date(s)	Procedure	Issue Title	Model Parent	QM(s)	Duration	Status	Customer delivery	ENG pp finished
2014-07-29	ATV-E-EL-BAT-025	12 RBAT Complement of charge with EPS Source charger Remark(s): K-Faktor not reached on RBAT4	FM4 FAUF100127721, ATV-E-SYS-100 0004	QM200053632	2.24	Finished	Yes Yes	
2014-07-29	ATV-E-EL-TCC-027	2 Verification of the Thruster platform Thermoswitches	FM4 FAUF100127721, ATV-E-SYS-100 0004		0.55	Finished	Yes Yes	

Single Procedure Execution

Dedicated Wiki page for each Test Procedure execution contains:

- Participating team members
- date/time, duration
- Current status
- Attachments like scanned As-Run documentation, generated Test Results, pictures

The screenshot shows a Wiki page titled "ATV-E-EL-GMS-008_0006" with the subtitle "GYRA calibration before launch". The page content is organized into sections: "Images", "Generic Images", "Scope Images", and "Thermal Images". The "Generic Images" section contains a grid of 12 images, each with a caption like "ATV-E-EL-GMS-008 0006 DSCF4428". The sidebar on the left includes navigation links (Main page, Add content, Recent changes, Help, MediaWiki Manual, Ideas for Improvements, List Notes), dashboards (Personal Dashboard, Procedure Execution, Procedure Postpr, Test Record Sheets, Testteam Task, Problem Reports), and a toolbox (What links here, Related changes, Upload file, Special pages, Printable version, Permanent link, Upload multiple files, Directory Upload, Browse properties, Semantic Upload). At the top, there are user links for "Eim5033" and various preferences.

Details	
Procedure	ATV-E-EL-GMS-008 (4)
Procedure Type	Operational Procedure
Parent Objects	<ul style="list-style-type: none">FAUF190027249QM200046373ATV-E-RIBRE-TRS-0587_0001
Model	FM3
Part of activity/campaign	ATV4 FS BRE - GMS
Location	BRE
Test Responsee(s)	<ul style="list-style-type: none">Eimke, MichaelVergnol, AlizeePerson:Eimke, Michael
Additional roles	
Schedule	2012/05/16 00:00:00 UTC - 2012/05/16 00:00:00 UTC
AIT Processing Status (Descr.)	Finished
Edit	
Execution	
Expected duration	6 [h] <ul style="list-style-type: none">2012/05/16 12:42:55 - 2012/05/16 18:22:07 (Duration: 5.65 [h])
Execution slice(s)	<ul style="list-style-type: none">Eimke, MichaelKamdoum, Rodrigue
Duration	5.65 [h]
Raised QM(s)	
Related QM(s)	
Completion status (Descr.)	Completely performed
Operator status (Descr.)	OK
Edit	
Postprocessing	
Scanned	Yes

Single Procedure Execution

Dedicated Wiki page for each Test Procedure execution contains:

- Participating team members
- date/time, duration
- Current status
- Attachments like scanned As-Run documentation, generated Test Results, pictures
- raised problems
- Automatically generated links to other relevant content:
 - As-Run
 - Post-processing data
 - EGSE Test Session
 - Shift Report

TOOLBOX

- What links here
- Related changes
- Upload file
- Special pages
- Printable version
- Permanent link
- Upload multiple files
- Directory Upload
- Browse properties
- Semantic Upload

ATV-E-EL-GMS-008 0006 DSCF4432	ATV-E-EL-GMS-008 0006 DSCF4433	ATV-E-EL-GMS-008 0006 DSCF4434	ATV-E-EL-GMS-008 0006 DSCF4435
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Scope Images

Thermal Images

ATV-E-EL-GMS-008 0006 DSCF4436	ATV-E-EL-GMS-008 0006 DSCF4438	ATV-E-EL-GMS-008 0006 DSCF4439
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Expected duration 6 [h]

- 2012/05/16 12:42:55 - 2012/05/16 18:22:07

Execution slice(s) (Duration: 5.65 [h])

- Einke, Michael
- Kamdoum, Rodrigue

Duration 5.65 [h]

Raised QM(s)

Related QM(s)

Completion status Completely performed (Descr.)

Operator status OK (Descr.) [Edit](#)

Postprocessing	
Scanned	Yes
SAP	Yes
ESA As-Run	Yes
ESA AIT-Report	Yes

[Edit](#)

File(s)

- ATV-E-EL-GMS-008 20120516 PDF (As-Run) (P)
- ATV-E-EL-GMS-008_0006_DTG_stimulation_profile.csv (Postprocessing Data) (P)
- ATV-E-EL-GMS-008_0006_Profile_DTG1_1553.csv (Postprocessing Data) (P)
- ATV-E-EL-GMS-008_0006_Profile_DTG1_TEV.csv (Postprocessing Data) (P)
- ATV-E-EL-GMS-008_0006_Profile_DTG2_1553.csv (Postprocessing Data) (P)
- ATV-E-EL-GMS-008_0006_Profile_DTG2_TEV.csv (Postprocessing Data) (P)
- ATV-E-EL-GMS-008_0006_Profile_DTG3_1553.csv (Postprocessing Data) (P)
- ATV-E-EL-GMS-008_0006_Profile_DTG3_TEV.csv (Postprocessing Data) (P)
- ATV-E-EL-GMS-008_0006_Profile_DTG4_1553.csv (Postprocessing Data) (P)
- ATV-E-EL-GMS-008_0006_Profile_DTG4_TEV.csv (Postprocessing Data) (P)

[Edit](#)

EGSE Session(s)

- SVFUSR1.ATV4_BRE.20120516T04_09_46

Shift Report(s)

- Shift Report 2012/05/16 BRE FM3 Early

Toolbox

[edit] [edit] [edit]

Shift Report

The test operators can create a wiki page containing additional remarks and annotations of the shift.

Useful tool for shift hand-over:

- For next shift responsible
- for external contributors or observers.

Contains automatically generated links to other relevant content:

- performed procedures
- raised problems
- test sessions.

page discussion edit with form edit history delete move protect watch refresh

Shift Report 2013/11/08 KRU FM4 Early

Report

General

ToDo

- The VVT protection needs to be removed before the OP [ATV-E-EL-EMA-020_0027](#) Let the protection off until the end of the TIC because the VVT will also be activated during the OP [ATV-E-EL-DRS-006_0013](#)

Proceeding

- Started with the TIC 06:00 local time
 - Started [ATV-E-SYS-010_0007](#) TIC (during startup JV_TCC_010 come up with one new WARNING PRS-2448 QM200051332). Finished 06:37 local time
 - Started [ATV-E-EL-CMS-001_0017](#) Test of ATV CMUs. Finished 07:07 local time
 - Started [ATV-E-EL-A51-002_0021](#) Test of ATV-A5 H32 related Event. Finished 07:31 local time
 - Started [ATV-E-EL-A51-001_0018](#) Test of ATV-A5 separation. Finished 11:05 local time
 - Started [ATV-E-EL-COM-043_0007](#) TDRS and PROX RF GO / NOGO Test
 - PRS-2449 QM200051328 at step 5.5.2.12 and following, signal on TMTC FEE was weak
 - Finished 16:51 local time
- shift handover local time

Category: Shift Reports

Details

Date	2013/11/08
Shift	Early
	07:00 - 13:30 GMT-3
Model	FM4
Location	KRU
Previous	Shift Report 2013/11/07 KRU FM4 Early
Next	Shift Report 2013/11/08 KRU FM4 Late
Operator(s)	■ Heim, Alexander ■ Hinrichs, Lars ■ Schmidt, Ulf-Esdert
Quality(s)	■ Wilkens, Stefan

Procedure Executions

- [ATV-E-EL-A51-001 0018](#) (Finished)
- [ATV-E-EL-A51-002 0021](#) (Finished)
- [ATV-E-EL-CMS-001 0017](#) (Finished)
- [ATV-E-EL-COM-043 0007](#) (Finished)
- [ATV-E-EL-ECLS-041 0013](#) (Finished)
- [ATV-E-EL-ECLS-042 0012](#) (Finished)
- [ATV-E-EL-GMS-002 0012](#) (Finished)
- [ATV-E-EL-GMS-013 0012](#) (Finished)
- [ATV-E-EL-GMS-040 0014](#) (Finished)
- [ATV-E-EL-TCC-004 0014](#) (Finished)
- [ATV-E-SYS-010 0007](#) (Finished)

QMs

- [QM200051328](#) (CSG: TM gap on TDRS1 (10s))
- [QM200051329](#) (CSG: SYS-010, RSPCU2 too hot)
- [QM200051352](#) (CSG: EL-TCC-004 TRIP OFF alarm)

EGSE Session(s)

- SVFUSR1.ATV5 KRU.20131108T08 59 21

Parallel Shift Reports

Non Conformance Report (NCR, QM)

Each NCR (QM) is mapped to a dedicated Wiki page to allow for search and link functions.

Features are:

- Semi-automated data import from SAP
- Contains textual information for full-text search inside the NCR descriptive text and performed actions
- Automated linking, e.g. to Procedure Execution that caused that problem, Test Session, Shift Report, etc.
- attached images / PDF files

The screenshot shows a web interface for a Non-Conformance Report (QM200052962). The page title is "QM200052962" and the content is "CSG:cables too short". The page is categorized as "Auto-generated content".

Parent Objects
This QM has been raised by the following objects:

Activities (Procedure Executions)
This QM is parent of the following objects: None

Related stuff
These objects claim to be related to this QM: None

Other QMs raised by the same object

Custom content

Initial description

DATE:06.05.2014 TIME:11:00 KRU Time
FAUF:100125451 PROCEDURE:
32DCP003 P02 and 32DCP004 P01 cables are too short

Position 1: cables too short (Kabelführung)

DATE:06.05.2014 TIME:11:00 KRU Time
FAUF:100125451 PROCEDURE:
during connection of SC to ICC after mating it was recognised that the 32DCP003 P02 and 32DCP004 P01 cables are too short

6 May 2014 NRB / CSG
AIRBUS DS: M.Hahne, B.Mauret, P.Schneider, A.Eilsleben
The harness is approx. 10cm to schort to connect the 32DCP003 P02 and 32DCP004 P01.
A rerouting of the harness at the area of the option 5 pipe is possible. This

QM Details

ID	QM200052962 View in SAP
Title	CSG:cables too short
Priority	
Project	234
Model	FM4
Template	
FAUF	FAUF100113617
FAUF Name	
Material	3553214
Material Name	INT_FACS_HARNESH
QM Order	5058741
Q-Status	Meldung abgeschlossen
Q-Status (SAP)	MMAB MAUF EIGV AMER MMDR
Date raised	2014/05/06
Originator	TIE5411EXT
Date modified	2014/05/07
Modifier	HAH3502
Timestamp	2014/05/09 12:39:06 UTC
Related FU(s)	

Files(s)

- QM200052962.pdf (QM printout) (P)
- QM200052962_DCP003.jpg (ATTACHMENT) (P)
- QM200052962_DSCN3710.JPG (ATTACHMENT) (P)

Non Conformance Report (NCR, QM)

Each NCR (QM) is mapped to a dedicated Wiki page to allow for search and link functions.

Features are:

- Semi-automated data import from SAP
- Contains textual information for full-text search inside the NCR descriptive text and performed actions
- Automated linking, e.g. to Procedure Execution that caused that problem, Test Session, Shift Report, etc.
- attached images / PDF files

performed successfully and no further actions are needed.

The harness was rerouted and the connection of the connectors was performed successfully. (see attached pictures)

AIRBUS DS Configuration Management agreed to QM-closure.

The harness was installed by FAUF 100113617. QM is relinked to this FAUF.

All Configuration-Items are in line with the AIRBUS DS-Configuration-Process.

*** QM closed ***

Action	Code	Text	Status	Responsee	UserStatus
1	ergänzenden FEA (FAUF) erstellen	1.1 create Q-FAUF to reroute harness	MAER MERF	Grit Roßberg	IO

[Hide description of position 1, action 1]

A rerouting of the harness at the area of the option 5 pipe is possible. This rerouting shall be performed. The harness shall be secured by permacell and cable protection at the area of the structure stiffeners.


Nota: the option 5 p.clamps have to be loosened to get better access to te rerouting area

Closed by Q-FAUF 190032271
G.Roßberg


2	Nacharbeit Fertigung	1.2 perform rerouting acc. Q-FAUF	MAER MERF	Patrick Schneider	IO
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[Show description of position 1, action 2]

Attachments



DCP003.jpg



DSCN3710.JPG

Category: QMs

Online Test Session

Condensed view of Test Operator actions at the test console for each test session:

- Operator actions and system responses, operator annotations, screenshots, etc. 📄
- Automatically generated/updated every 10min from the different EGSE benches; efficient tool for remote test observers or test support by remote experts (e.g. EGSE support from Bremen during test execution in Kourou) 📄
- Automated linking to Procedure Executions, Shift Reports, etc. 📄

The screenshot shows a web interface for a test session. At the top, there's a navigation bar with tabs for 'page', 'discussion', 'edit', 'history', 'delete', 'move', 'protect', 'watch', and 'refresh'. Below this is the session title 'SVFUSR1.ATV5 KRU.20140726T10 53 29'. On the left, there's a sidebar with sections for 'navigation', 'dashboards', 'search', and 'toolbox'. The main content area is titled 'Attached files' and contains a table with columns for 'Filename', 'Filetype', and 'Filepage'. On the right, there's a 'Details' panel for the selected file 'SVFUSR1.ATV5_KRU.20140726T10_53_29', showing fields like 'Id', 'EGSE', 'Model', 'Location', 'Name', 'References', 'User', 'FAS', 'Checksum(s)', 'FAS AVIFML', 'Version(s)', 'Start date', 'End date', 'Running session', 'Previous', and 'Next'. Arrows from the text on the left point to the 'Attached files' table and the 'Details' panel.

Filename	Filetype	Filepage
REP_ATV-E-SYS-001_2014-07-26_11.06.45.828_long.pdf	EGSE_SESSION_LONG_REPORT_PORT_PDF	Filepage
REP_ATV-E-EL-PFS-010_2014-07-26_12.31.42.703_long.pdf	EGSE_SESSION_LONG_REPORT_PORT_PDF	Filepage
REP_EGSE_ATV_REPORT_2014-07-26_11.01.33.402_long.pdf	EGSE_SESSION_LONG_REPORT_PORT_PDF	Filepage
REP_ATV-E-EL-BAT-025_2014-07-26_17.51.25.042_long.pdf	EGSE_SESSION_LONG_REPORT_PORT_PDF	Filepage
REP_2014-07-26_19.20.06.414_long.pdf	EGSE_SESSION_LONG_REPORT_PORT_PDF	Filepage
REP_ATV-E-EL-DPS-014_2014-07-26_16.07.52.050_long.pdf	EGSE_SESSION_LONG_REPORT_PORT_PDF	Filepage
REP_ATV-E-SYS-005_2014-07-26_11.34.03.492_long.pdf	EGSE_SESSION_LONG_REPORT_PORT_PDF	Filepage
REP_ATV-E-SYS-121_2014-07-26_16.03.06.882_long.pdf	EGSE_SESSION_LONG_REPORT_PORT_PDF	Filepage
REP_ATV-E-SYS-121_2014-07-26_19.08.40.859_long.pdf	EGSE_SESSION_LONG_REPORT_PORT_PDF	Filepage
REP_ATV-E-SYS-121_2014-07-26_11.25.56.019_long.pdf	EGSE_SESSION_LONG_REPORT_PORT_PDF	Filepage
REP_ATV-E-SYS-001_2014-07-26_11.06.45.828_short.pdf	EGSE_SESSION_SHORT_REPORT_PORT_PDF	Filepage
REP_2014-07-26_19.20.06.414_short.pdf	EGSE_SESSION_SHORT_REPORT_PORT_PDF	Filepage
REP_ATV-E-EL-PFS-010_2014-07-26_12.31.42.703_short.pdf	EGSE_SESSION_SHORT_REPORT_PORT_PDF	Filepage
REP_ATV-E-SYS-121_2014-07-26_16.03.06.882_short.pdf	EGSE_SESSION_SHORT_REPORT_PORT_PDF	Filepage
REP_ATV-E-SYS-121_2014-07-26_19.08.40.859_short.pdf	EGSE_SESSION_SHORT_REPORT_PORT_PDF	Filepage
REP_ATV-E-SYS-121_2014-07-26_11.25.56.019_short.pdf	EGSE_SESSION_SHORT_REPORT_PORT_PDF	Filepage
REP_ATV-E-EL-BAT-025_2014-07-26_17.51.25.042_short.pdf	EGSE_SESSION_SHORT_REPORT_PORT_PDF	Filepage
REP_ATV-E-EL-DPS-014_2014-07-26_16.07.52.050_short.pdf	EGSE_SESSION_SHORT_REPORT_PORT_PDF	Filepage
REP_ATV-E-SYS-005_2014-07-26_11.34.03.492_short.pdf	EGSE_SESSION_SHORT_REPORT_PORT_PDF	Filepage
REP_EGSE_ATV_REPORT_2014-07-26_11.01.33.402_short.pdf	EGSE_SESSION_SHORT_REPORT_PORT_PDF	Filepage
REP_ATV-E-EL-DPS-014_2014-07-26_16.07.52.050_rep	EGSE_SESSION_REPORT_REP	EP
REP_EGSE_ATV_REPORT_2014-07-26_11.01.33.402_rep	EGSE_SESSION_REPORT_REP	EP
REP_ATV-E-EL-BAT-025_2014-07-26_17.51.25.042_rep	EGSE_SESSION_REPORT_REP	EP
REP_ATV-E-SYS-005_2014-07-26_11.34.03.492_rep	EGSE_SESSION_REPORT_REP	EP
REP_ATV-E-EL-PFS-010_2014-07-26_12.31.42.703_rep	EGSE_SESSION_REPORT_REP	EP
REP_ATV-E-SYS-121_2014-07-26_11.25.56.019_rep	EGSE_SESSION_REPORT_REP	EP
REP_2014-07-26_19.20.06.414_rep	EGSE_SESSION_REPORT_REP	EP
REP_ATV-E-SYS-001_2014-07-26_11.06.45.828_rep	EGSE_SESSION_REPORT_REP	EP
REP_ATV-E-SYS-121_2014-07-26_19.08.40.859_rep	EGSE_SESSION_REPORT_REP	EP
REP_ATV-E-SYS-121_2014-07-26_16.03.06.882_rep	EGSE_SESSION_REPORT_REP	EP
2014-07-25-16-03-50.atvegse-ws11.log.zip	EGSE_SESSION_MSGHANDLER_LC_ER_LOGFILE	Filepage
REM_2014-07-26_19.03.42.945_LOG_BOOK_RBAT_FM4_GL_LAUNCH_CAMPAIGN.xls	EGSE_SESSION_REPORT_ATTACHMENT	Filepage
REM_2014-07-26_19.03.30.445_ATV-E-EL-BAT-025.zip	EGSE_SESSION_REPORT_ATTACHMENT	Filepage
REM_2014-07-26_16.25.07.453_DPU3_dump_boot_error_table.txt	EGSE_SESSION_REPORT_ATTACHMENT	Filepage
REM_2014-07-26_18.00.03.066_snapshot_IHM_CHARGE_RRAT_BEFORE.tif	EGSE_SESSION_REPORT_ATTACHMENT	Filepage

Online Test Session

Condensed view of Test Operator actions at the test console for each test session:

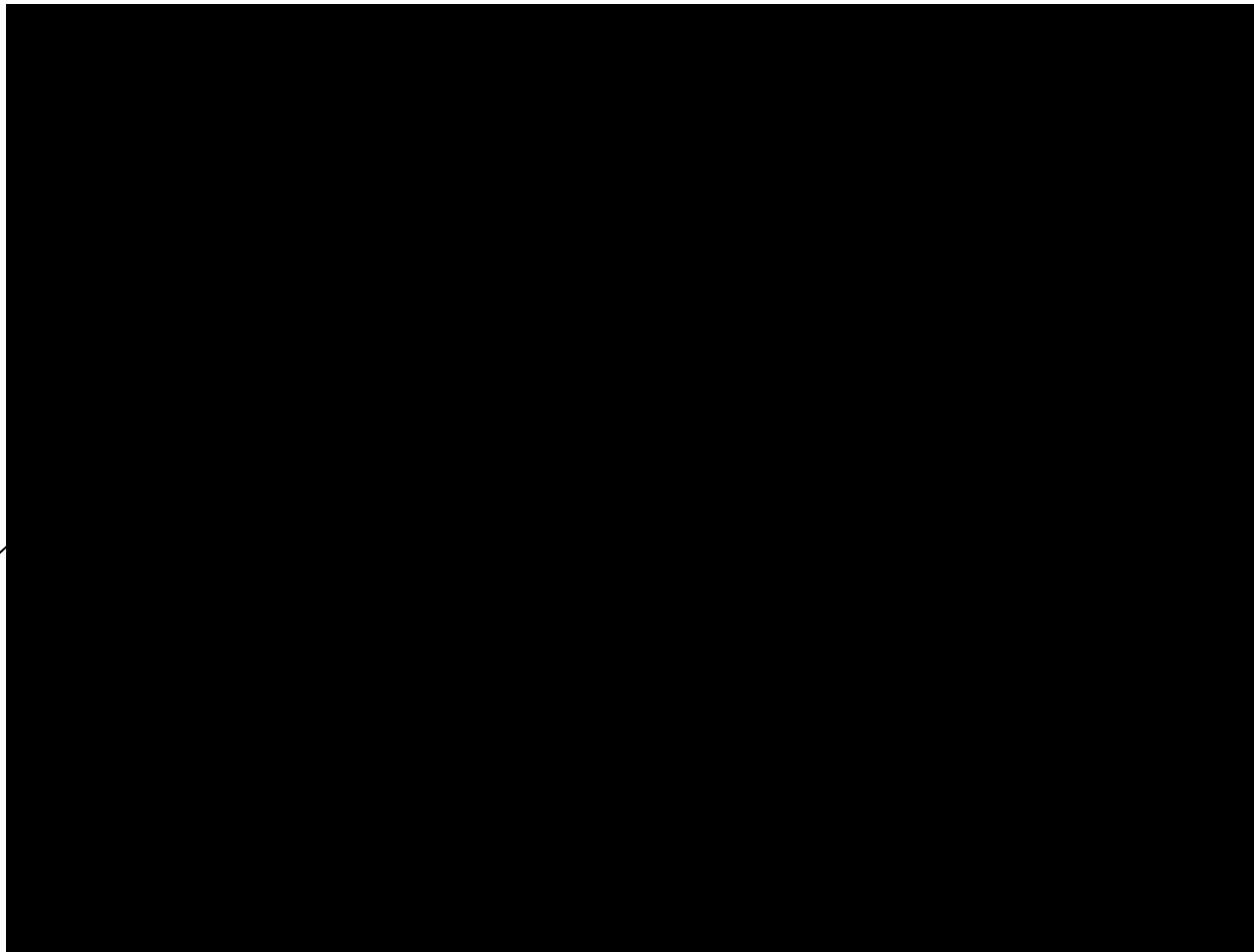
- Operator actions and system responses, operator annotations, screenshots, etc. 📄
- Automatically generated/updated every 10min from the different EGSE benches; efficient tool for remote test observers or test support by remote experts (e.g. EGSE support from Bremen during test execution in Kourou) 📄
- Automated linking to Procedure Executions, Shift Reports, etc. 📄

The screenshot displays a web-based interface for viewing test sessions. At the top, a list of sessions is shown, including details like session ID, start/end dates, and UTC times. Below this, a section titled 'HLCL Commands and Operator Remarks' provides a detailed log for a specific session. The log includes timestamps and messages such as 'init_egse', 'Return value for /ATV:FS/ALT:EGSE:IGSW:GWSW_CONF:AFITXAFITX (\$CLEAN, ...,): \$\$U.: \$\$SUCCESS', and various table configurations like 'REAL-SIM Configuration', 'ATV AVIONIC_LIMITS', and 'HLTM discrete parameter: state changes'. The interface also features 'Top' links for navigation and a 'Media' link for downloading reports.

Online Test Session

Condensed view of Test Operator actions at the test console for each test session:

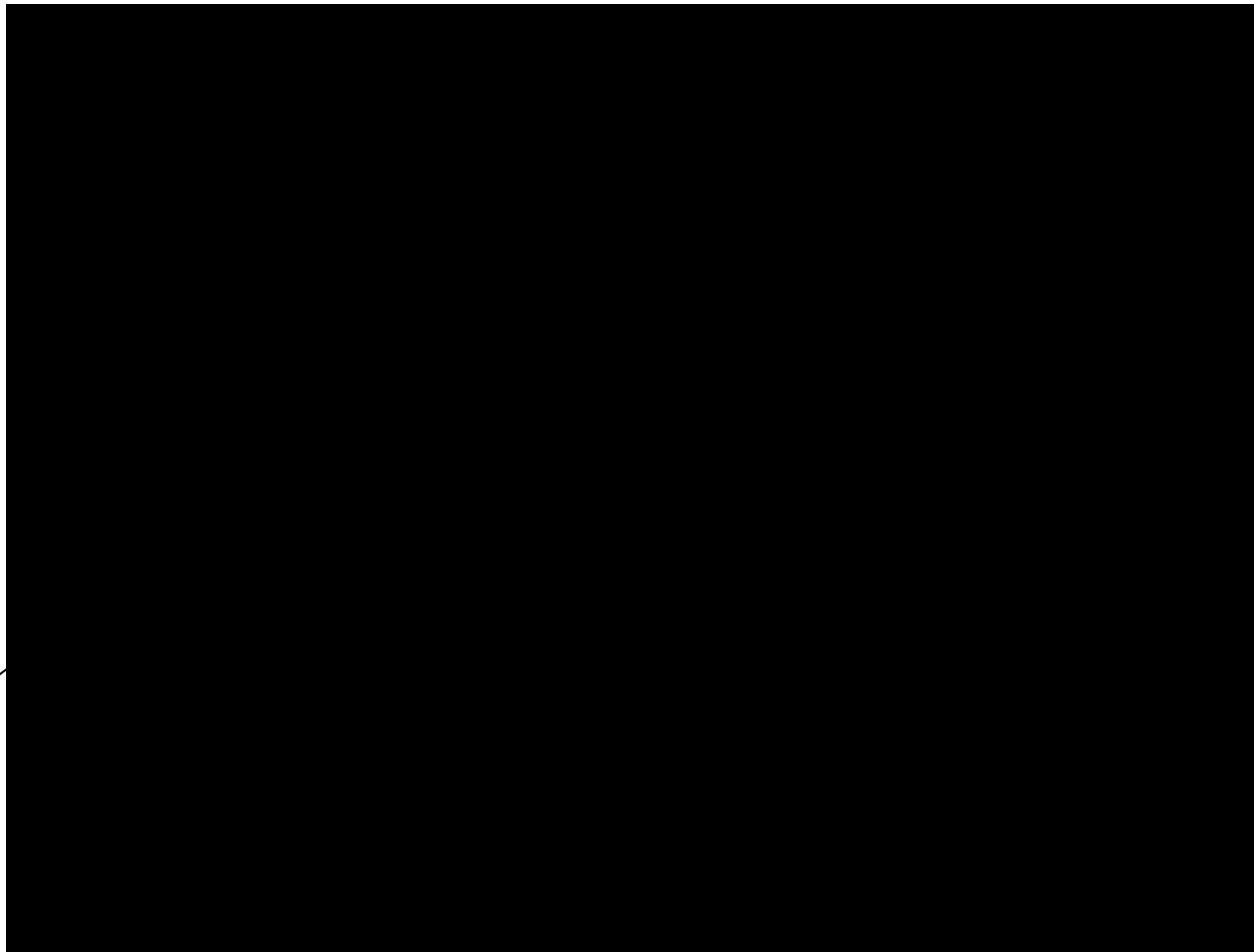
- Operator actions and system responses, operator annotations, screenshots, etc. 🗨
- Automatically generated/updated every 10min from the different EGSE benches; efficient tool for remote test observers or test support by remote experts (e.g. EGSE support from Bremen during test execution in Kourou) 🗨
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Online Test Session

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- Automated linking to Procedure Executions, Shift Reports, etc. 🗑️



Access to ATV System Engineering Information

Wiki pages with ATV functional breakdown (Product Tree, Engineering drawings, functional descriptions, Interface definitions)

Direct link to harness information (electrical signals down to cable, connector, pin) allows investigation of occurred discrepancies directly on-floor during test execution.

Used by:

- Test teams to access as-built engineering data during trouble shooting activities
- Engineering team performing test analysis and evaluation

EAB (Component)

For a general description have a look at: [ATV Executive Summary](#)

Equipped Avionics Bay (EAB) Avionics concept and architecture [edit]

Source: ^[1]

The EAB is a non-pressurized compartment that accommodates most of the ATV avionics, such as:

- 4 rechargeable batteries as well as 3 **Power Conditioning and Distribution Units (PCDU)**
- 3 **Fault Tolerant Computers (FTCs)** made of 3 **Data Processing Units (DPUs)**
- Guidance, Navigation and Control sensors**, e.g. **GYRO assembly** and 3 accelerometers
- 2 computers dedicated to **Monitoring Safety Unit (MSU)**
- Communications equipment
- 4 **Thermal Control Units (TCU)**
- 1 **Command and Monitoring Unit (CMU)**

Component

EAB (Component)

Name: Equipped Avionics Bay

ID: EAB

Superior component: SC (Component)

Subcomponents: EAB TRAY 1, EAB TRAY 10, EAB TRAY 2, EAB TRAY 3, EAB TRAY 4, EAB TRAY 5, EAB TRAY 6, EAB TRAY 7, EAB TRAY 8, EAB TRAY 9

Accommodates system roles: MSBAT1, MSBAT2, MSPCU1, MSPCU2, RSBAT1, RSBAT2, RSPCU1, RSPCU2, TCU 1, 2, 3, 4, CMU 1, GYRA, GPS Antenna 1, 2

Access to ATV System Engineering Information

Wiki pages with ATV functional breakdown (Product Tree, Engineering drawings, functional descriptions, Interface definitions)

Direct link to harness information (electrical signals down to cable, connector, pin) allows investigation of occurred discrepancies directly on-floor during test execution.

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The screenshot shows a web browser window displaying a Wiki page titled "31DCP005_P02". The page content includes a navigation sidebar on the left with sections for "navigation", "dashboards", "search", and "toolbox". The main content area features a "Pin Definition" tab and a table of pin definitions. A note above the table states: "The pin definition is derived from the Latelec Pin Definition matrix for the EAB only".

From Signal	Pin Nr.	To Box	To Connector	To Pin	To Signal
HP1 PWR PEV1	A	31DCP005	P02	A	HP1 PWR PEV1
RTN1 LPWR1 RECS RSPCU1	a/	21RSPCU11	P01	A1	Return 35,8V LP
CP1 PWR PEV1	B	31DCP005	P02	B	CP1 PWR PEV1
RTN2 LPWR1 RECS RSPCU1	b/	21RSPCU11	P01	A2	Return 35,8V HP
HP2 PWR PEV1	C	31DCP005	P02	C	HP2 PWR PEV1
0VP1 PWR VDM1	c/	11PCDU11	P35	A1	Class E OUT SSSPC #9 POWER RTN 1
CP2 PWR PEV1	D	31DCP005	P02	D	CP2 PWR PEV1
0VP2 PWR VDM1	d/	11PCDU11	P35	A2	Class E OUT SSSPC #9 POWER RTN 2
+VP1 PWR MLU1 MLU2	E	31DCP005	P02	E	+VP1 PWR MLU1 MLU2
+VP2 PWR VDM1	e/	11PCDU11	P35	A6	Class E OUT SSSPC #9 POWER 2
0VP1 PWR MLU1 MLU2	F	31DCP005	P02	F	0VP1 PWR MLU1 MLU2
RTN1 PWR KMT1 RSPCU1	f/	21RSPCU11	P02	A1	Return 28V line 1 (PWR)
+VP2 PWR MLU1 MLU2	G	31DCP005	P02	G	+VP2 PWR MLU1 MLU2
RTN2 PWR KMT1 RSPCU1	g/	21RSPCU11	P02	A2	Return 28V line 1 (PWR)
0VP2 PWR MLU1 MLU2	H	31DCP005	P02	H	0VP2 PWR MLU1 MLU2
RTN1 HPWR1 RECS RSPCU1	h/	21RSPCU11	P01	A3	Return 35,8V HP
SPARE	J				
SPARE	K				
RTN2 HPWR1 RECS RSPCU1	k/	21RSPCU11	P01	A4	Return 35,8V HP
+VP1 PWR STR1	L	31DCP005	P02	L	+VP1 PWR STR1
0VP1 PWR STR1	M	31DCP005	P02	M	0VP1 PWR STR1
SPARE	m/				
+VP2 PWR STR1	N	31DCP005	P02	N	+VP2 PWR STR1
SPARE	n/				
0VP2 PWR STR1	P	31DCP005	P02	P	0VP2 PWR STR1
SPARE	p/				
+VP1 LPWR1 RECS RSPCU1	q/	31DCP005	P02	q/	+VP1 LPWR1 RECS RSPCU1
+VP1 PWR ECWS1	R	31DCP005	P02	R	+VP1 PWR ECWS1
+VP2 LPWR1 RECS RSPCU1	r/	31DCP005	P02	r/	+VP2 LPWR1 RECS RSPCU1
0VP1 PWR FCWS1	s	31DCP005	P02	S	0VP1 PWR FCWS1

Access to ATV System Engineering Information

Wiki pages with ATV functional breakdown (Product Tree, Engineering drawings, functional descriptions, Interface definitions)

Direct link to harness information (electrical signals down to cable, connector, pin) allows investigation of occurred discrepancies directly on-floor during test execution.

Used by:

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The screenshot displays a web interface for 'PCDU1'. At the top, there are navigation tabs: 'page', 'discussion', 'edit', 'history', 'delete', 'move', 'protect', 'watch', and 'refresh'. Below this is a 'Main Page' section with sub-tabs: 'Main Page', 'Diagrams', 'Connectivity', and 'Harness Drawings'. The 'Connectivity' tab is active, showing a table of 'Associated connector(s)'. The table has columns for 'Connector', 'Connector Type', 'Wireline', and 'To connector'. An arrow points from the text 'Direct link to harness information...' to the table. To the right of the table is a 'Functional Role' diagram showing a circuit with various components and connections. Below the diagram is a table with details for 'PCDU1', including 'ID', 'Boxcode', 'Superior Functional Unit', 'Deployed equipment', 'Mounted on', '1st Databus', and 'Circuit'.

Connector	Connector Type	Wireline	To connector
11PCDU11 P01	DAMA15S	11WAP101	11DCP005 J05
11PCDU11 P02	DAMA15S	11WAP101	11DCP005 J05
11PCDU11 P03	DAMA15S	11WAP101	11DCP005 J05
11PCDU11 P04	DAMA15S	11WAP101	11DCP005 J05
11PCDU11 P06	06G-09-35SN	11WTMA01	11RBAT11 P05
11PCDU11 P07	06G-25-07SN	11WSP104	11RBAT11 P01
11PCDU11 P08	06G-17-08SN	11WSP103	31DCP006 P01
11PCDU11 P09	06G-17-08SN	11WXXC01	12DCP002 J01 12DCP002 J02
11PCDU11 P14	DBM5W5P	11WSP105	21RSPCU11 P06
11PCDU11 P15	DCM8W8P	11WSP117	11TCU11 P10
11PCDU11 P16	DBM5W5P	11WSP111	11TCU11 P21
11PCDU11 P17	DCM8W8P	11WSP116	11TCU11 P22
11PCDU11 P18	DBM5W5P	11WSP110	11TCU11 P23
11PCDU11 P19	DCM8W8P	11WSP106	31DCP005 P02
11PCDU11 P20	DBM5W5P	11WSP113	11DTRS11 P05 11CFPA1 P04
11PCDU11 P21	DCM8W8P	11WSP106	31DCP005 P02
11PCDU11 P22	DBM5W5P	11WSP106	31DCP005 P02 11DCP005 J03
11PCDU11 P23	DCM8W8P	11WSP109	11TCU11 P19
11PCDU11 P24	DBM5W5P	11WSP107	11DTRS11 P06
11PCDU11 P25	DCM8W8P	11WSP108	11TCU11 P24
11PCDU11 P26	DBM5W5P	11WSP106	31DCP005 P02
11PCDU11 P27	DCM8W8P	11WSPA01	11GEUA1 P01A
11PCDU11 P28	DBM5W5P	11WSP114	11CFPA1 P01
11PCDU11 P29	DCM8W8P	11WSHA01	11TCU11 P08 11DCP003 J02
11PCDU11 P31	DCM8W8P	11WSP118	11SPA11 P03
11PCDU11 P33	DCM8W8P	11WSHA01	11TCU11 P09 11DCP003 J02
11PCDU11 P34	DBM5W5P	11WSP115	11CMU71 P122
11PCDU11 P35	DCM8W8P	11WSP106	31DCP005 P02
11PCDU11 P36	DBM5W5P	11WSP112	11DPU91 P01
11PCDU11 P37	DBM5W5P	11WSP119	11RBCAMA1 P02
11PCDU11 P38	DCM8W8P	11WSP106	11DCP005 J03
11PCDU11 P39	DCM8W8P	11WSHA01	31DCP010 P02 31DCP010 P01
11PCDU11 P40	DAMA15S	11WXXC01	31DCP008 P01 11CFPA1 P17

PCDU1	
ID	PCDU1
Boxcode	11PCDU11
Superior Functional Unit	PWS
Deployed equipment	PCDU
Mounted on	EAB TRAY 7
1st Databus 1553:	1553-BUS-A
Circuit:	11DCP003 11DCP005 11DCP001 12DCP002 31DCP005 31DCP008 31DCP010 CMU1 CPF1 CPF2 DPU1 GEU1 RBA11 RBCAM1 RSPCU1 SSPA1 TCU1 TCU2 TCU3 DTRS1

STE Management

Management of STE (Special Test Equipment) supported by the Wiki:

- Browse list of STE (Break-out boxes, Scopes and Connector Savers) compatible with connector type(s)
- Relation to e.g. Test Procedures as “required items” or to As-Runs as “used items” supports efficient test preparation and traceability of problems related to STE tools.
- STE compatibilities with flight connectors

special page

Browse data: BOB

Click on one or more items below to narrow your results.

▼ **Manufacturer:**
Astrium GmbH (102)

▼ **Connector Type:**
(2) · 00-09-01SA (1) · 06G-11-35PA (1) · 06G-11-35PB (1) · 06G-11-35PC (1) · 06G-11-35PN (2) · 06G-11-35SA (1) · 06G-11-35SB (1) · 06G-11-35SC (1) · 06G-11-35SN (2) · 06G-11-98PA (1) · 06G-11-98PB (1) · 06G-11-98SA (1) · 06G-11-98SN (1) · 06G-13-04PC (1) · 06G-13-04PN (1) · 06G-13-04SC (1) · 06G-13-04SN (1) · 06G-13-98PA (1) · 06G-13-98PB (1) · 06G-13-98PC (1) · 06G-13-98PD (1) · 06G-13-98PN (1) · 06G-13-98SA (1) · 06G-13-98SB (1) · 06G-13-98SC (1) · 06G-13-98SD (1) · 06G-13-98SN (1) · 06G-15-19PN (1) · 06G-15-19SN (1) · 06G-15-35PA (2) · 06G-15-35PN (1) · 06G-15-35SA (2) · 06G-15-35SN (1) · 06G-16-08PN (1) · 06G-16-08SN (1) · 06G-16-35PB (2) · 06G-16-35SB (2) · 06G-17-08PA (1) · 06G-17-08PB (1) · 06G-17-08PN (2) · 06G-17-08SA (1) · 06G-17-08SB (1) · 06G-17-08SC (1) · 06G-17-08SN (2) · 06G-17-35PA (1) · 06G-17-35PN (1) · 06G-17-35SA (1) · 06G-17-35SN (1) · 06G-19-32SA (1) · 06G-19-32SN (1) · 06G-19-35PA (1) · 06G-19-35PN (1) · 06G-19-35SA (1) · 06G-19-35SN (1) · 06G-21-11PN (1) · 06G-21-11SN (1) · 06G-21-35PN (1) · 06G-21-35SN (1) · 06G-21-41PA (1) · 06G-21-41PN (1) · 06G-21-41SA (1) · 06G-21-41SN (1) · 06G-23-35PA (3) · 06G-23-35PB (2) · 06G-23-35PN (1) · 06G-23-35SA (3) · 06G-23-35SB (2) · 06G-23-35SC (1) · 06G-23-35SN (1) · 06G-25-07PA (1) · 06G-25-07PN (3) · 06G-25-07SA (1) · 06G-25-07SN (3) · 06G-25-19-PA (1) · 06G-25-19-SA (1) · 06G-25-19PA (1) · 06G-25-19SA (1) · 06G-25-24PA (1) · 06G-25-24PN (1) · 06G-25-24SA (1) · 06G-25-35PN (2) · 06G-25-35SN (2) · 06G-25-43PA (1) · 06G-25-43PN (1) · 06G-25-43SA (1) · 06G-25-43SN (1) · 06G-25-61PA (1) · 06G-25-61PB (2) · 06G-25-61PN (1) · 06G-25-61SA (1) · 06G-25-61SB (2) · 06G-25-61SN (1) · 06G-25-24SN (1) · 07-09-35SAL (1) · 07-09-35SNL (1) · DAMA15P (4) · DAMA15S (4) · DBM24W7P (1) · DBM24W7S (1) · DBM5W5P (4) · DBM5W5S (4) · DBMA25P (7) · DBMA25S (7) · DBMA44P (2) · DBMA44S (2) · DBMA44S (2) · DCM8W8P (2) · DCM8W8S (2) · DCMCA37P (2) · DCMCA37S (2) · DDMA50P (8) · DDMA50S (8) · DDMA78P (2) · DDMA78S (2) · DEMA09P (6) · DEMA09S (6) · DEMA15P (2) · DEMA15S (2)

▼ **Pin size:**
2 (74) · 4 (20)

▼ **Pin count:**
1 (1) · 11 (1) · 13 (2) · 15 (6) · 19 (1) · 24 (1) · 25 (7) · 32 (1) · 35 (18) · 4 (2) · 43 (2) · 44 (2) · 5 (4) · 50 (8) · 61 (4) · 7 (4) · 78 (2) · 8 (8) · 9 (6) · 98 (7)

Showing below up to 25 results starting with #1.

View (previous 25 | next 25) (20 | 50 | 100 | 250 | 500)

BOB	Has SAP Item Id	Has STE Type	Has manufacturer	Has model description	Has serial number	Has connector type	Has pin count	Has pin size
BOB 1139334	1139334	Break-out-Box	Astrium GmbH			DBM24W7P DBM24W7S	24	2
BOB 1139354	1139354	Break-out-Box	Astrium GmbH			06G-23-35PB 06G-23-35SB	35	
BOB 1139355	1139355	Break-out-Box	Astrium GmbH			06G-23-35PC 06G-23-35SC	35	
BOB 1140262	1140262	Break-out-Box	Astrium GmbH			DBMA44P DBMA44S	44	2
BOB 1140263	1140263	Break-out-Box	Astrium GmbH			DBMA44P DBMA44S	44	2
BOB 1140264	1140264	Break-out-Box	Astrium GmbH			06G-13-04SN 06G-13-04PN	4	
BOB 1140381	1140381	Break-out-Box	Astrium GmbH			06G-13-04SN 06G-13-04PC	4	

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The screenshot shows a MediaWiki page for a Break-out Box (BOB) with ID 1140389. The page is titled "BOB_1140389" and includes a navigation sidebar on the left. The main content area is divided into sections: "Images", "Information on this BoB", and "Usage". The "Information on this BoB" section lists the following details: Pin count: 98, Testpin Size: 2, Connector Type1: 06G-13-98PC, and Connector Type2: 06G-13-98SC. The "Usage" section lists the procedures and plugs associated with this BOB: "This BoB is used in the following Procedures: ATV-E-RIBRE-PR-0023, ATV-E-RIBRE-PR-0024, ATV-E-RIBRE-PR-0025, ATV-E-RIBRE-PR-0026" and "This BoB fits on the following plugs: 11RBAT12 P08, 11RBAT22 P08, 11RBAT32 P08, 11RBAT42 P08". A "Generic STE Details" sidebar on the right shows a photograph of the device and its specifications: Name: BOB_1140389, SAP Id: 1140389, Type: Break-out-Box, Manufacturer: Astrium GmbH, Serial, Calibration needed: No. The page also features a search bar and a toolbox at the bottom left.

Campaign Management

Test campaigns define a set of Operational Test Procedures

Dedicated dashboard for each campaign (here TIC = Transport Integrity Check of ATV Flight Model ATV5) with status of all required test executions

- CP = Completely performed
- PPAR = Partially performed as required
- PP = Partially performed with NCR

The AIT Processing Status

- 1st Box yellow: planned
- 1st Box green: in execution
- 2nd Box green: Proc. completed
- 3rd Box green: Post proc. Done
- 4th Box green: final close-out

For each test procedure a link to all related resources (Wiki pages, attached files, NCRs, test result files acquired from the EGSE).

ATV5 FS KRU - TIC

Main | **OP Executions** | OP Execution Statistics | Required OPs | OP Close-Out | OP Close-Out Statistics | STE | Attachments | Calendar

Procedure	Name	Start	End	Duration	FAUF	As-Run(s)	Completion status	Operator status	AIT Processing status	
ATV-E-EL-GMS-040	Test of STR	2013-11-08	2013-11-08	0.57 h	100122014	ATV-E-EL-GMS-040 201311108.pdf (As-Run)	PPAR	OK	OK	Details
ATV-E-SYS-010	Transportation Integrity Check (TIC)	2013-11-08	2013-11-12	43.57 h	100122014	ATV-E-EL-SYS-010 201311108.pdf (As-Run)	PPAR	OK	OK	Details
ATV-E-EL-GMS-002	ACCA functional and sign test	2013-11-08	2013-11-08		100122014	ATV-E-EL-GMS-002 201311108.pdf (As-Run)	PPAR	OK	OK	Details
ATV-E-EL-ECLS-041	PEV and Temperature Pressure Sensors test	2013-11-08	2013-11-08	0.39 h	100122014	ATV-E-EL-ECLS-041 201311108.pdf (As-Run)	PPAR	OK	OK	Details
ATV-E-EL-ASI-001	Test of ATV-A5 separation	2013-11-08	2013-11-08	0.71 h	100122014	ATV-E-EL-ASI-001 201311108.pdf (As-Run)	PPAR	OK	OK	Details
ATV-E-EL-TCC-004	Thermal Control Chain - Heater Lines Resistance Test	2013-11-08	2013-11-09	5.78 h	100122014	ATV-E-EL-TCC-004 Run1 201311109.pdf (As-Run)	PP	PART	OK	Details
QM200051352 (CSG: EL-TCC-004 TRIP OFF alarm, Meldung abgeschlossen)										
ATV-E-EL-ECLS-042	PPRV test	2013-11-08	2013-11-08	0.19 h	100122014	ATV-E-EL-ECLS-042 201311108.pdf (As-Run)	PPAR	OK	OK	Details
ATV-E-EL-A5I-002	Test of ATV-A5 H32 related Event	2013-11-08	2013-11-08	0.21 h	100122014	ATV-E-EL-A5I-002 201311108.pdf (As-Run)	PPAR	OK	OK	Details
ATV-E-EL-GMS-013	Test of GYRA	2013-11-08	2013-11-08		100122014	ATV-E-EL-GMS-013 201311108.pdf (As-Run)	PPAR	OK	OK	Details
ATV-E-EL-CMS-001	Test of ATV CMUs	2013-11-08	2013-11-08	0.52 h	100122014	ATV-E-EL-CMS-001 201311108.pdf (As-Run)	PPAR	OK	OK	Details
ATV-E-EL-COM-043	TDRS and PROX RF GO / NOGO Test	2013-11-08	2013-11-08	6.03 h	100122014	ATV-E-EL-COM-043 201311108.pdf (As-Run)	PPAR	OK	OK	Details
QM200051328 (CSG: TM gap on TDRS1 (10s), Meldung in Arbeit)										
ATV-E-EL-SGS-012	Verify the interface between CMU and SADE	2013-11-09	2013-11-09	0.36 h	100122014	ATV-E-EL-SGS-012 201311109.pdf (As-Run)	PPAR	OK	OK	Details
ATV-E-EL-PFS-011	Test of SSU / MSU lines	2013-11-09	2013-11-09	0.47 h	100122014	ATV-E-EL-PFS-011 201311109.pdf (As-Run)	PPAR	OK	OK	Details
ATV-E-EL-ECLS-031	FAN1 and ASD-DSD Test	2013-11-09	2013-11-09	0.26 h	100122014	ATV-E-EL-ECLS-031 201311109.pdf (As-Run)	PP	OK	OK	Details
ATV-E-EL-	Test of GPS receivers	2013-	2013-	1.88 h	100122014	ATV-E-EL-GMS-003	PPAR	OK	OK	Details

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- 4th Box green: final close-out

For each test procedure a link to all related resources (Wiki pages, attached files, NCRs, test result files acquired from the EGSE).

special page

Ein5033 my talk admin links my preferences my watchlist my contributions log out

Pure mode is OFF: Toggle Recursive mode is OFF: Toggle PAUSED are shown: Toggle SCHEDULED are shown: Toggle

Procedure	Title	Latest issue	Start date	End date	Issue	Duration	Completion status	Operator status	AIT Processing status	Link
ATV-E-EL-ASI-001	Test of ATV-A5 separation	5	2013-11-08	2013-11-08	5	0.71	PPAR	█	Finished	Details
ATV-E-EL-ASI-002	Test of ATV-A5 H32 related Event	3	2013-11-08	2013-11-08	4	0.21	PPAR	█	Finished	Details
ATV-E-EL-CMS-001	Test of ATV CMUs	7	2013-11-08	2013-11-08	8	0.52	PPAR	█	Finished	Details
ATV-E-EL-COM-043	TDRS and PROX RF GO / NOGO Test	2	2013-11-08	2013-11-08	5	6.03	PPAR	█	Finished	Details
					Raised QM(s): QM200051328: CSG TM gap on TDRS1 (10s) Open					
ATV-E-EL-DRS-006	ISS power &WPO tests	3	2013-11-12	2013-11-12	7	4.23	PPAR	█	Finished	Details
					Raised QM(s): QM200051363: CSG DRS-006 GPS_CHECK_FAILED_WATCHDOG Closed QM200051380: CSG loss of broadcast sync at MILBUS C Closed					
ATV-E-EL-DRS-011	Power Commutation to ISS	7	2013-11-12	2013-11-12	8	0.16	PPAR	█	Finished	Details
					Raised QM(s): QM200051362: UNDEFINED					
ATV-E-EL-DRS-012	DRS Activation Deactivation	6	2013-11-12	2013-11-12	3	0.5	PPAR	█	Finished	Details
ATV-E-EL-DRS-016	RSBAT Test	5	2013-11-12	2013-11-12	5	1.43	█	█	Finished	Details
ATV-E-EL-DRS-026	DRS Verification	4	2013-11-12	2013-11-12	4	1.4	PPAR	█	Finished	Details
					Raised QM(s): QM200051385: CSG DRS-026 Unexp RID and check failed Closed					
ATV-E-EL-ECL-S-031	FAN1 and ASD-DSD Test	4	2013-11-09	2013-11-09	7	0.26	█	█	Finished	Details
ATV-E-EL-ECL-S-041	PEV and Temperature Pressure Sensors test	3	2013-11-08	2013-11-08	3	0.39	PPAR	█	Finished	Details
ATV-E-EL-ECL-S-042	PPRV test	4	2013-11-08	2013-11-08	4	0.19	PPAR	█	Finished	Details
ATV-E-EL-ECL-S-050	MLU test	3	2013-11-09	2013-11-09	3	0.44	PPAR	█	Finished	Details
ATV-E-EL-FMA-010	IVRC switching ON-OFF	2	No execution of this procedure found!							
ATV-E-EL-FMA-020	IVT switching ON-OFF	5	2013-11-	2013-11-09	5	0.81	PPAR	█	Finished	Details

Media Wiki technology used in the ATV Test Wiki

- The „Semantic MediaWiki“ extension on top of the Media Wiki was used to allow to add semantic properties for each page
- Each object is represented by
 - A visual context (Wiki page with text, images, tables)
 - Semantic properties like „has serial number“, „belongs to subsystem xyz“, „has been executed at“
- Dashboards are built-up through connections of objects together with queries
- Examples for such queries are:
 - Retrieve all NCRs related to a given subsystem
 - Retrieve recursively all NCRs related to a given item (equipment, component, etc.) or a part of it (connector, pin, etc.)
 - Identification of (flight-) connector pins verified by given test procedure executions
- Semantic properties may be defined individually for each object, or more efficiently through “semantic templates”; this allows for flexible management of the data through template editing and forms

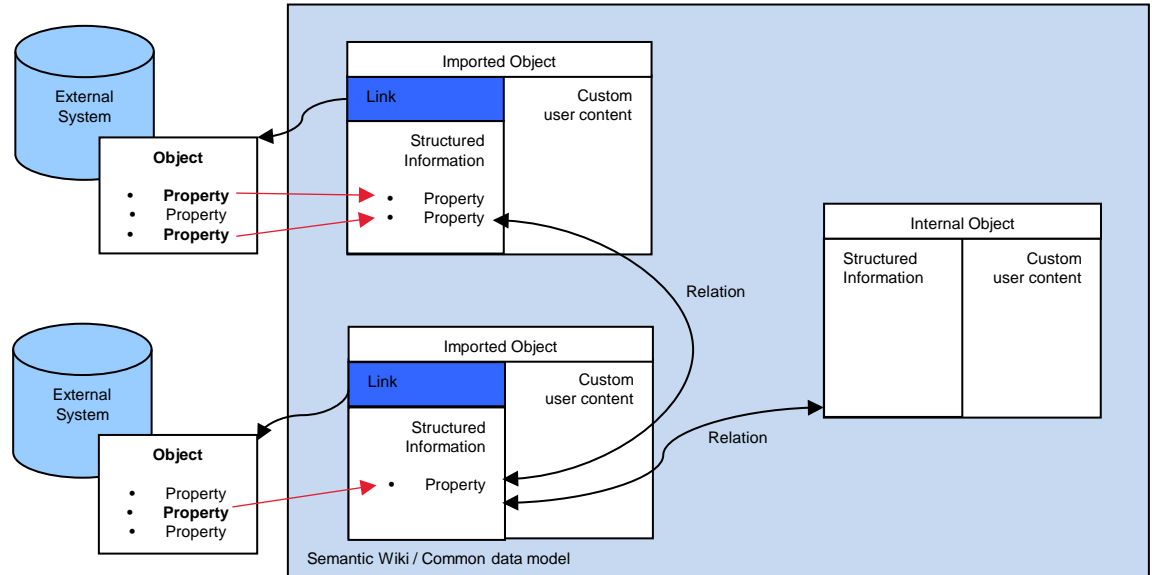
Import of external data

Imported objects contain:

- A link to the external source
- Structured information (partially) imported from source
- Custom user content
- Relations to other Wiki objects

Wiki internal objects contain:

- Structured information
- Custom user content
- Relations to other Wiki objects



EAB (Component)

Class Component + 🔍

Has id EAB + 🔍

Has name Equipped Avionics Bay + 🔍

Has subsystem [EAB TRAY 1](#) + 🔍, [EAB TRAY 10](#) + 🔍, [EAB TRAY 2](#) + 🔍, [EAB TRAY 3](#) + 🔍, [EAB TRAY 4](#) + 🔍, [EAB TRAY 5](#) + 🔍, [EAB TRAY 6](#) + 🔍, [EAB TRAY 7](#) + 🔍, [EAB TRAY 8](#) + 🔍, [EAB TRAY 9](#) + 🔍, [MSBAT1](#) + 🔍, [MSBAT2](#) + 🔍, [MSPCU1](#) + 🔍, [MSPCU2](#) + 🔍, [RSBAT1](#) + 🔍, [RSBAT2](#) + 🔍, [RSPCU1](#) + 🔍, [RSPCU2](#) + 🔍

Is abstract true + 🔍

Is subsystem of [SC \(Component\)](#) + 🔍

Modification date 13 February 2010 14:24:49 + 🔍

Categories Components, Abstract Objects, Spacecraft components

[hide properties that link here](#)

[ATV-E-RIBRE-PR-0003 0001](#) + 🔍, [ATV-E-RIBRE-PR-0003 0002](#) + 🔍, [ATV-E-RIBRE-PR-0003 0003](#) + 🔍, [ATV-E-RIBRE-PR-0003 0004](#) + 🔍, [ATV-E-RIBRE-PR-0003 0005](#) + 🔍, [ATV-E-RIBRE-PR-0003 4 2009/02/04](#) + 🔍, [ATV-E-RIBRE-PR-0003 4 2009/03/19](#) + 🔍, [ATV-E-RIBRE-PR-0003 4 2009/03/31](#) + 🔍, [ATV-E-RIBRE-PR-0004 0001](#) + 🔍, [ATV-E-RIBRE-PR-0004 0002](#) + 🔍, [ATV-E-RIBRE-PR-0004 0003](#) + 🔍, [ATV-E-RIBRE-PR-0005 0001](#) + 🔍, [ATV-E-RIBRE-PR-0005 0002](#) + 🔍, [ATV-E-RIBRE-PR-0003 4 2009/03/19 0003](#) + 🔍, [ATV-E-RIBRE-PR-0006 0001](#) + 🔍, [ATV-E-RIBRE-PR-0006 0002](#) + 🔍, [ATV-E-RIBRE-PR-0006 0003](#) + 🔍, [ATV-E-RIBRE-PR-0007 0001](#) + 🔍, [ATV-E-RIBRE-PR-0007 0002](#) + 🔍, [ATV-E-RIBRE-PR-0007 0003](#) + 🔍, ...

Has been performed on system level

[ATV MMT TN 0294 4.0.pdf](#) + 🔍, [Tray 1 layout.png](#) + 🔍, [Tray 10 layout.png](#) + 🔍, [Tray 7 layout.png](#) + 🔍, [Tray 8 layout.png](#) + 🔍, [Tray 9 layout.png](#) + 🔍

Has reference

[SC \(Component\)](#) + 🔍

Has subsystem

[EAB2 \(Component\)](#) + 🔍

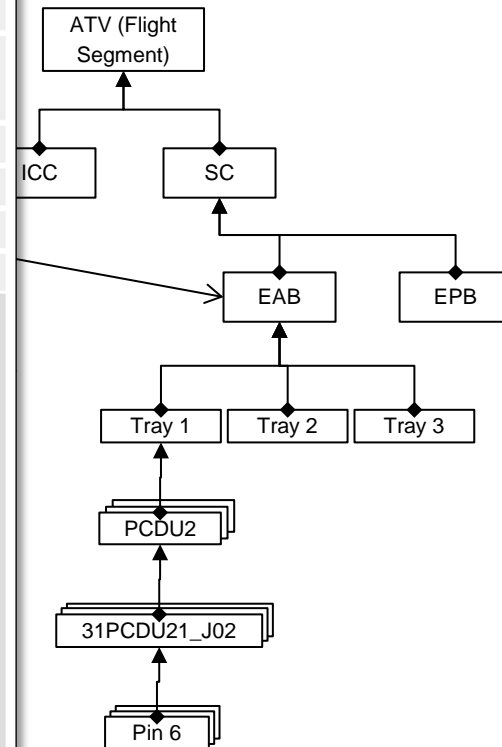
Is instance of

[EAB TRAY 1](#) + 🔍, [EAB TRAY 10](#) + 🔍, [EAB TRAY 2](#) + 🔍, [EAB TRAY 3](#) + 🔍, [EAB TRAY 4](#) + 🔍, [EAB TRAY 5](#) + 🔍, [EAB TRAY 6](#) + 🔍, [EAB TRAY 7](#) + 🔍, [EAB TRAY 8](#) + 🔍, [EAB TRAY 9](#) + 🔍, [MSBAT1](#) + 🔍, [MSBAT2](#) + 🔍, [MSPCU1](#) + 🔍, [MSPCU2](#) + 🔍, [RSBAT1](#) + 🔍, [RSBAT2](#) + 🔍, [RSPCU1](#) + 🔍, [RSPCU2](#) + 🔍, [Russian System Battery](#) + 🔍, [Russian System Power Controlling Unit](#) + 🔍, ...

Is subsystem of

[EAB](#) + 🔍

redirect page



Lessons Learned

The system was well accepted and used during the ATV test campaigns.

Re-use of such a system in the MPCV-ESM^{*)} ground facilities is foreseen with improvements and additional functionality in the following areas:

- A procedure development tool based on a Domain Specific Language (DSL) for the development of test procedures
- Integration with the Verification & Validation Management Tool (VVMT) to close the link between Test Specification and Execution
- Management the Integration and V&V campaigns with support of the Wiki as the collaboration platform for optimized access to engineering data, documentation, and test planning, execution and report generation.
- A unified and configuration controlled test data archive
- Interface NCR System

^{*)} MPCV-ESM = Multi-Purpose Crew Vehicle – European Service Module

Conclusion

The system we are targeting for would be a Project independent collaboration platform to perform AIT and AIV tasks indepent from the underlying ground system

It allows:

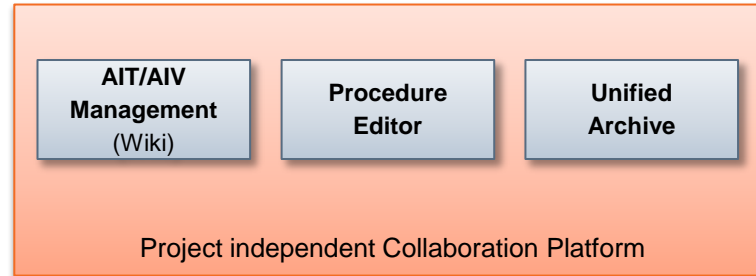
- To prepare test procedures
- Manage test and verification campaigns
- Manage test executions and evaluations

The main components of this system are illustrated on the next sildes

Project Independent AIT/AIV Collaboration Platform

Project independent collaboration platform provides:

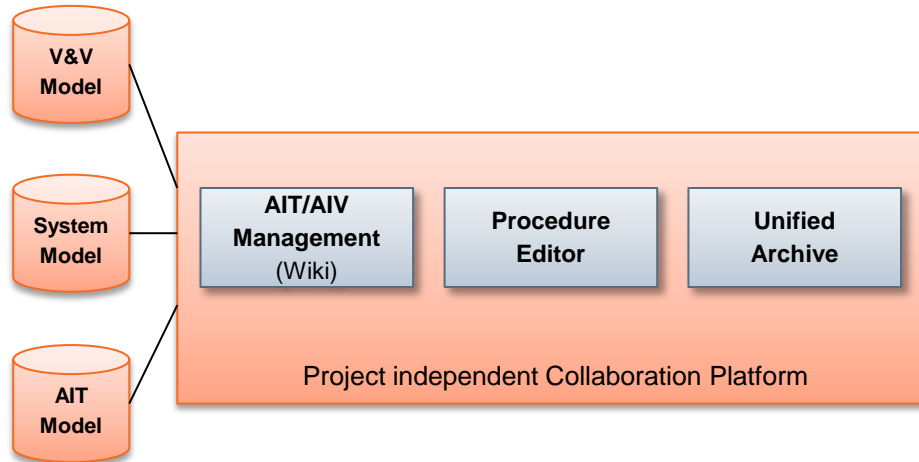
- A Wiki system to manage AIT/AIV data and tasks
- A DSL-based Procedure Editor to develop test procedures taking full advantage of software development features
- Unified Archive: to store and use data generated during test executions



Project Independent AIT/AIV Collaboration Platform

Project specific data is imported from:

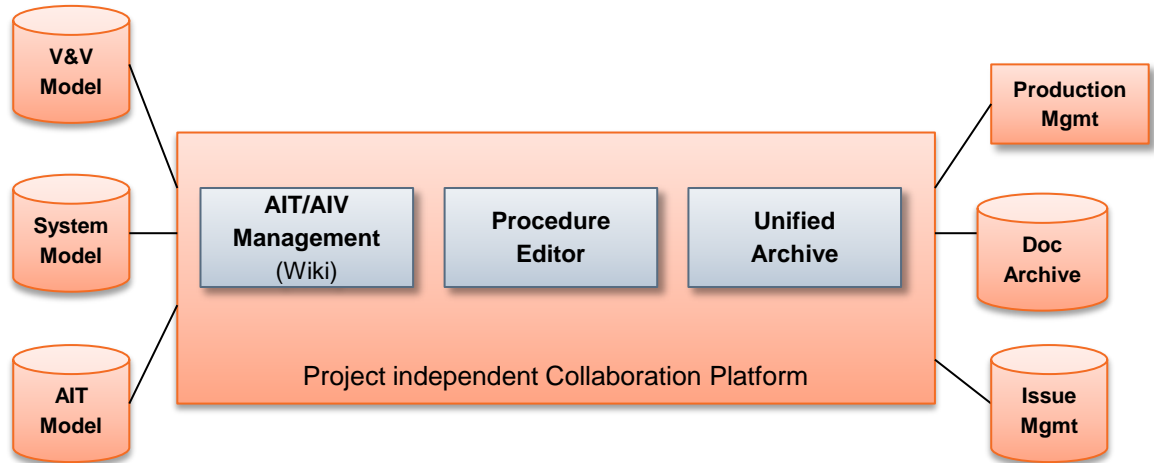
- V&V Model: Requirements & Test campaign data (VCD)
- System Model: Spacecraft data as TM/TC definitions, product tree, ICD, harness
- AIT Model: STE, breakout-boxes, test harness



Project Independent AIT/AIV Collaboration Platform

Data is synchronized with external systems:

- Production Management: to retrieve production orders and ABCL data (e.g. from SAP systems)
- Document Archive: to access baseline documentation as specifications, interface definitions and user manuals when needed in the AIT/AIV process
- Issue Management: to retrieve references and status information on NCRs or tickets during test preparation, execution and evaluation

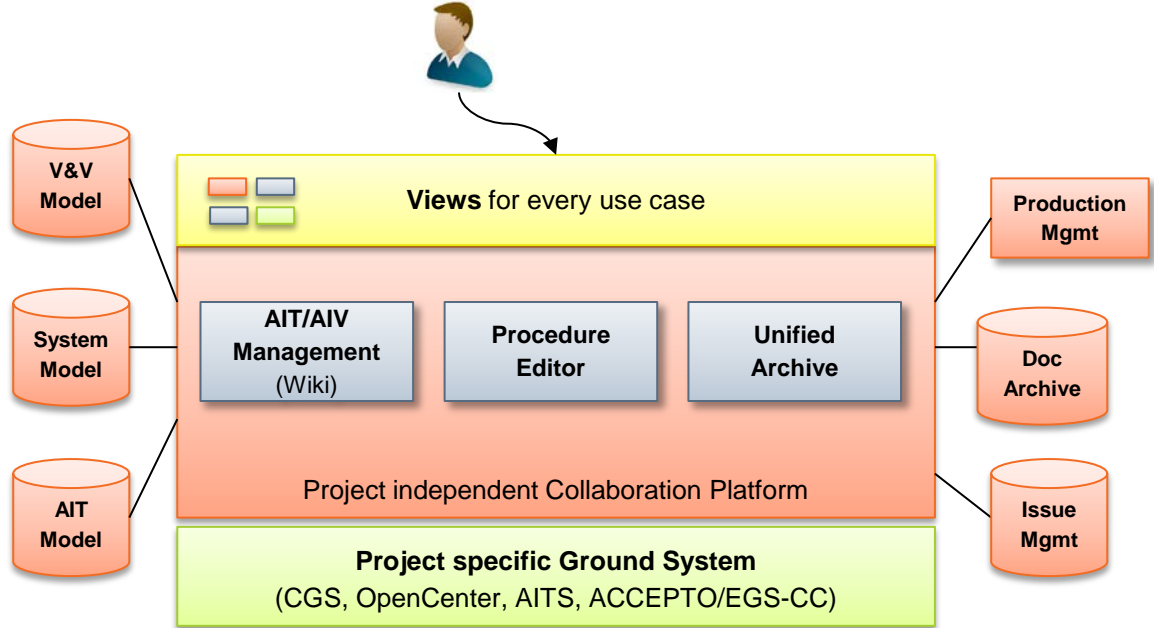


Project Independent AIT/AIV Collaboration Platform

The test execution platform becomes independent from the preparation and management environment.

This allows for:

- AIT and AIV products can be used on different target ground systems: CGS, OpenCenter, AITS, ACCEPTO/EGS-CC
- Re-use of AIT/AIV products, both vertical (within the same project) and horizontal (re-use of test artefacts between different projects)
- Savings in training and familiarization effort for AIT and AIV personnel



The END

Thanks for your attention!
Questions?

Backup Slides



Flight Model focused Dashboard

Procedure Summary for one Flight Model (ATV2, ATV 3 or ATV4):

- allows to dig in into any detail of the executed or planned test activities
- Currently active procedures
- Procedure executions still in post processing
- Engineering post processing
- Last 15 procedures performed

The dashboard displays a summary of procedure executions for a specific flight model. It includes a navigation sidebar, a main content area with a table of active procedures, and a detailed table for the last 15 procedures performed.

Navigation:

- Main page
- Add content
- Recent changes
- Help
- MediaWiki Manual
- Ideas for Improvements
- List Notes

Dashboard Procedure Execution

This Dashboard shall provide all necessary information on the execution of Procedures. Use the sub-pages Dashboard Procedure Execution/FM2, Dashboard Procedure Execution/FM3, Dashboard Procedure Execution/FM4 to filter these informations on ATV Models, use the BrowseData Special Page to filter/search for a specific Procedure Execution.

Contents [hide]

- Currently active procedures
- Procedure Executions still in Postprocessing
- ENG Postprocessing
- Last 15 Procedures performed
- Upcoming test activities
- Scheduled Procedure Executions without defined dates

Currently active procedures [edit]

Date(s)	Procedure	Issue	Title	Model	Parent	QM(s)	Duration	Status	Customer delivery	ENG pp finished
To create a new Procedure Execution, click here...										

Procedure Executions still in Postprocessing [edit]

Date(s)	Procedure	Issue	Title	Model	Parent	QM(s)	Duration	Status	Customer delivery	ENG pp finished
[Empty table body]										

ENG Postprocessing [edit]

Date(s)	Procedure	Issue	Title	Model	Parent	QM(s)	Duration	Status	Customer delivery	ENG pp finished
[Empty table body]										

Last 15 Procedures performed [edit]

Date(s)	Procedure	Issue	Title	Model	Parent	QM(s)	Duration	Status	Customer delivery	ENG pp finished	
2014-07-29	ATV-E-EL-BAT-025	12	RBAT Complement of charge with EPS Source charger Remark(s): K-Faktor not reached on RBAT4	FM4	FAUF100127721, ATV-E-SYS-100 0004	QM200053632	2.24	Finished	Yes	Yes	Details
2014-07-29	ATV-E-EL-TCC-027	2	Verification of the Thruster platform Thermoswitches	FM4	FAUF100127721, ATV-E-SYS-100 0004		0.55	Finished	Yes	Yes	Details

Flight Model focused Dashboard

Procedure Summary for one Flight Model (ATV2, ATV 3 or ATV4):

- allows to dig in into any detail of the executed or planned test activities
- Currently active procedures
- Procedure executions still in post processing
- Engineering post processing
- Last 15 procedures performed
- Create new procedure executions
- Upcoming test activities
- Scheduled procedure executions without defined dates

07-28 2014-07-29			Remark(s) Check failed on DRS_DTS_PONKQ21 & PONKQ22		SYS-100 0004								
2014-07-28 2014-07-29	ATV-E-SYS-100	6	ATV Launch Count-down at D-1	FM4	FAUF100127721	QM200053631, QM200053632	6.66	Finished	Yes	Yes			Details
2014-07-28	ATV-E-SYS-210	11	Data Transfer from ATV-CC via ICARE Network	FM4	FAUF100127721, ATV-E-SYS-100 0004		1.43	Finished	Yes	Yes			Details
2014-07-26	ATV-E-EL-BAT-025	12	RBAT Complement of charge with EPS Source charger	FM4	FAUF100127009		1.29	Finished	Yes	Yes			Details
2014-07-26	ATV-E-EL-DPS-014	6	Dump DPU	FM4	FAUF100127331, ATV-E-SYS-121 0004	QM200053616	1.73	Finished	Yes	Yes			Details
2014-07-26	ATV-E-EL-PFS-010	8	MSBAT Good Health	FM4	FAUF100127331, ATV-E-SYS-121 0004		3.52	Finished	Yes	Yes			Details
2014-07-26	ATV-E-SYS-005	9	ATV switch ON, check and monitoring	FM4	FAUF100127331, ATV-E-SYS-121 0004		0.66	Finished	Yes	Yes			Details
2014-07-26	ATV-E-SYS-121	5	ATV functional check at D-2	FM4	FAUF100127331	QM200053616		Finished	Yes	Yes			Details

For a complete list of all Procedure executions, [click here](#)
To create a new Procedure Execution, [click here](#)...

Upcoming test activities [\[edit\]](#)

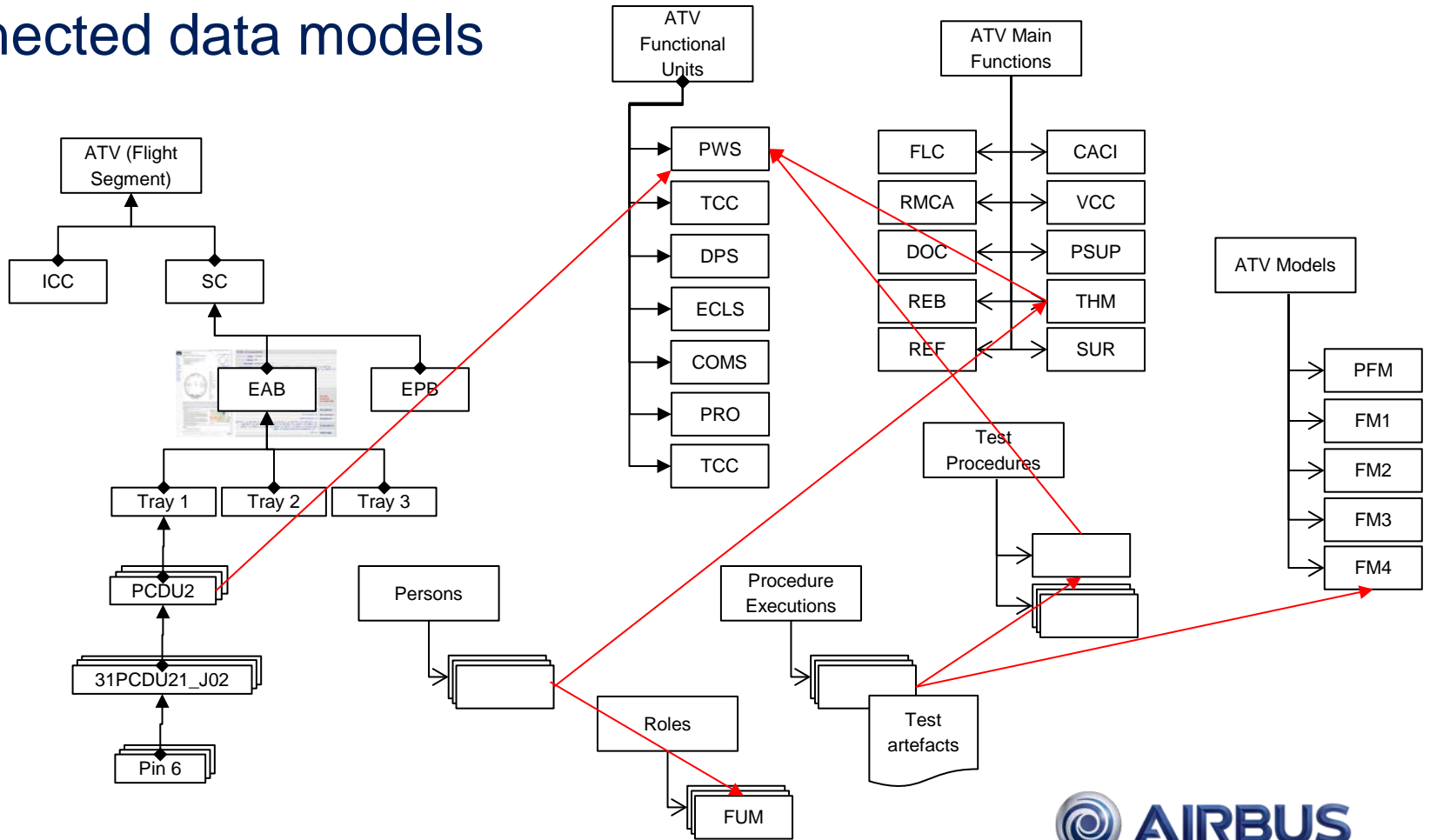
Start	End	Model	Procedure	Issue	Title	Parent(s)	AIT Processing Status	None
To create a new Scheduled Procedure Execution, click here ...								

Scheduled Procedure Executions without defined dates [\[edit\]](#)

Model	Procedure	Issue	Title	Parent(s)	Status	
FM4	ATV-E-FL-PRO-230	5	ATV PRSS Option 5 Final Integration Process	FAUF100126022, ATV-E-SYS-090 0007	Scheduled	Details
FM4	ATV-E-RIBRE-PR-0199	3	SADM Inspection of Connectors, Harness and Area below Inner Cover Remark(s) Inspection of spare SADM Will be done by mechanics and QI	FAUF190030546	Scheduled	Details

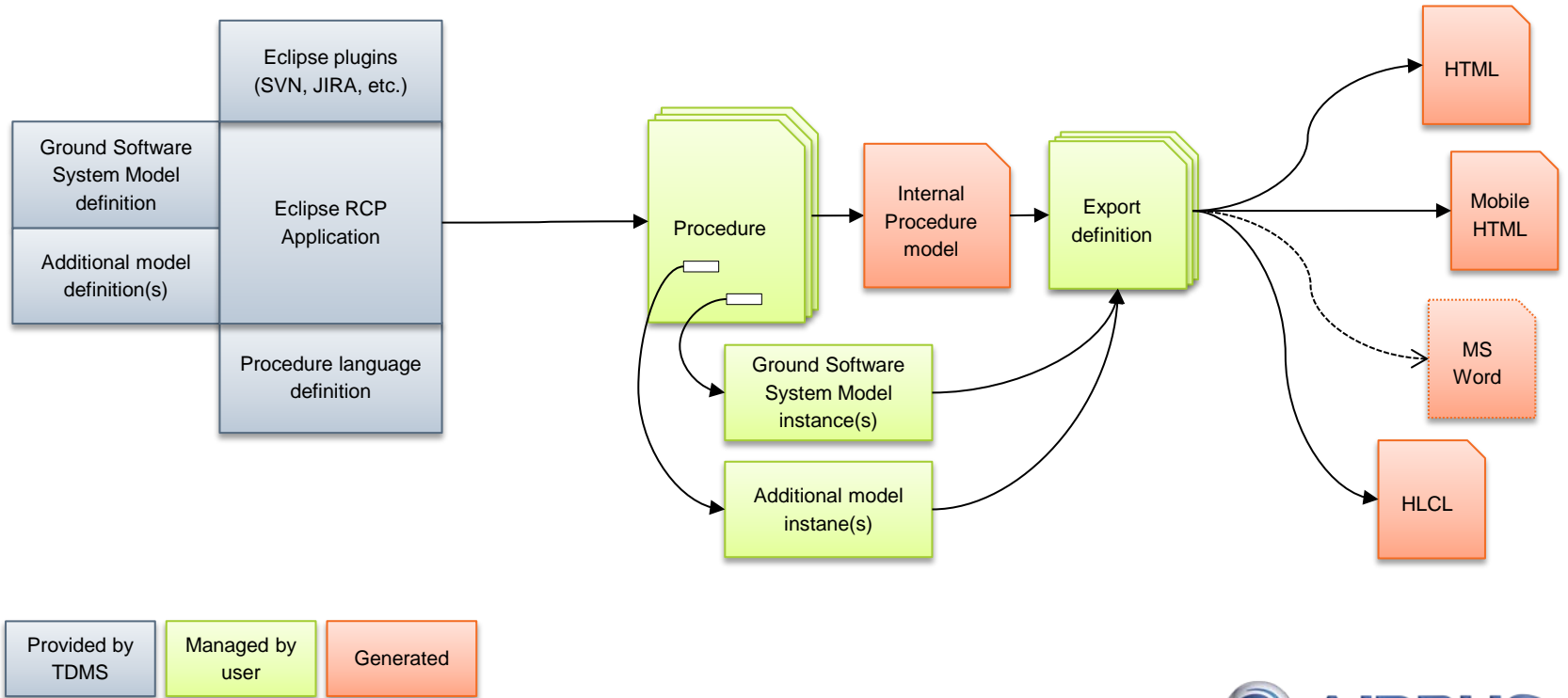
Category: Dashboards

Connected data models



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TDMS Procedure Development Tool – Prototype



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