SAE Architecture Analysis and Design Language

AS-2C AADL Subcommittee Meeting

January 29-31, 2018

Toulouse, France

AADL

Upcoming SAE/AADL Meetings

Now on the 3 meetings per year schedule. Could go back to 4 as V3 is balloted.

Winter 2018 – Toulouse, ERTS 2018, Jan 29 – Jan 31

Spring 2018– SEI Pittsburgh, May 14-17

 Fall 2018 – SAE London, Nov 6-8, Aerospace Systems and Technology Conference, (ASTC).   This is late but interesting. Will meeting in Nov affect you?

~~**Fall 2018 – SAE Oct 15-18, Portland Oregon.**~~

Spring 2019 - Feb 2019 in US

Spring 2020 – End of January or early Feb – Toulouse (ERTS is every 2 years) or

- **Frederic Mallet interested in providing for the AADL meeting north of Nice**
- **Paris**
- **SEI**

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AS5506 AADL Standard Status

- SAE standard AS5506 Architecture Analysis & Design Language published.
  - Nov, 2004.
  - Jan, 2009 . V2.0 Published w Graphics Annex
    http://www.sae.org/technical/standards/AS5506A
  - SAE V2.1 AS5506B, Published, Sept 2012
  - SAE V2.2 AS5506C, Ballot completed, Published Jan 21, 2017

- SAE Annexes AS5506/1, June 2006. Includes Annexes for Graphics, Ada & C Programming Guidelines, Error Modeling, Meta Model

- SAE Annexes AS5506/2, January 2011. Includes:
  - Behavior Annex, Data Annex, ARINC 653 Annex.

- AS5506/1A, Published, Sept 2015 – Annex A: ARINC653 Annex, Annex C: Code Generation Annex, Annex E: Error Model Annex

- AS5506/2A - Behavior Annex, published Aug 2017

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AS5506 AADL Standard Roadmap

- We now have permission to have separate annexes and they will be bundled to make them more affordable. The 2 series could be a bundle.
- Next =>SAE AS5506/2B. Bundling 2A, 2B, … -
- Behavior Annex is 2A
- Network Annex near ready 3 – informal ballot for May 2018?
- Security next – 4? May 2019?
- Update AADL Core to V3.0 AS5506D - Upward compatibility needed with translator, if downward compatibility possible, should consider. Needs to be stable as well with translator from 2C, both maintained for a while. Jun 2019
- ARINC 653 Annex, will depend on AADL V3 multi-core, 5
- Data Annex is waiting for AADL V3, 6, depends on units,
- Code Generation Annex after AADL V3, depends on runtime also, would be 2F
- Updated EMV3 with integration with Behavior Annex (cross dependancy) Now have internal ports between annexes. Need example to show how to use ports. Example could be an AIR.
- Formal Behavior – update to 2B
- Upgrade to runtime services now, is that against 2.2 or 3.0.

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AADL WG Activities

- Requirements Annex (80% ?) => Peter has textual and assurance case capability in OSATE, planning to combine with Requirements Annex.

- Constraints (Analysis) Annex (50% ?) - (Open Lead) First draft provided but not enough consensus to carry forward. Includes OSATE compatible toolset to specify.

- Behavior Annex   (100%) (Etienne, Pierre D, Jean Pierre, Brian Larson). Completed. Next phase formal annotations (behavior constraints) sub annex. (EB, JP, BL) after study of runtime services.

- Network Annex – (90%)(Alexey …). Next draft by ?.

- ARINC 653 Update to new ARINC for Multi-Core with Part 2 and 4. Update when multi-core expression standard ready.   Steve Vestal, Alexey?

- Data Annex (95%) and Code Generation Annex (Jerome) => Some work on Data annex and experiments with code generator needed to finalize. Reviewing runtime services this meeting and current issues.

- Security Annex (25%)– Dave Gluch .

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AADL Annexes Being Developed and Brought to Committee

- Some annexes should be published, some will be developer provided and widely used without publication as part of the standard.

- FACE Annex proposed by Steve Vestal, first draft to be provided. Could be AIR document plus properties in an Annex.

- Jerome suggested other AIRs. Safety AIR 4754 and 4761, integration with system engineering. AIR by S18 AADL equivalent. Paper by SEI on safety could be converted to an AIR.

- Hybrid Annex – On hold as we consider need. Need the interface from world to system. Interface to Modelica. Brendan and Brian discussing. May be better to have something like the code generation annex. Ties to time domain.

- STPA and AADL – tremendous opportunity from EMV up and down abstraction levels. Related to Security annex.

- Exploring FMI wrapper for AADL. OCARINA will have an FMI export. Adds an additional cyber-physical analysis approach. May lead to annex. FMI also being worked by Ellidiss.

- Synchronous Systems - Jean Pierre, Fredrick Mallet – considering how continuous time can be added ("Hybrid annex", FMI) . Fredrick willing to sponsor meeting at his University in France. 2018?

- Rockwell? – need behavior side of the constraints annex. Industrial experiments with AGREE and Resolute continuing.

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Tutorials for User Support

- Tutorials to date: BLESS (Fort Lauderdale), STOOD (Orlando), Paris (ASIIST), Toulouse (Compass), Toulouse (TASTE), Minneapolis (FUSED), Valencia (RDALITE), Jacksonville (BLESS Isolette), Montreal (MASIW), Santa Barbara (AADL Inspector 1.3), Orlando (OSATE Safety), Valencia (TASTE), San Diego 1&2 (no tutorial), Madrid (MASIW), Seattle (used for V3 discussion), Toulouse (No tutorial), Germany (MILS w std AADL or ?), Pittsburgh (will be the two day workshop), Toulouse (ALISA), Atlanta (OCARINA), Fort Worth (attend conference) ***So many possible, may need workshop.***

Potential for future meetings:

- Cheddar and Ellidiss STOOD/AADL Inspector

- SCADE AADL

- RAMSES – Fall 2018 proposed by Dominique (London)

- Adventium TradeSpace, or Security Analysis, or Scheduling/Rapid Build, ISOSCELES, STPA related

- MASIW

- TASTE

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Joint Research

- Proposal for FMI (experiments with OCARINA) was funded for FY17
- This now depends on Alex.
- Of interest:
- Need for Graphical Capability for modeling with Behavior Annex.
- Seamless refinement from SysML requirements /behavior.

AADL

Ballots to stabilize older Standard Generic Open Architecture from AS-2A

- Stabilization is needed to warn users that the standard is no longer being maintained but keeps it available for continuing use.

- Ballot has been issued, the stabilization warning with a copy of the associated standards. Dorothy will assist.

- GOA is an architecture for operating systems, similar to and pre-ceeded FACE.

- AIR5314: Introduction to Generic Open Architecture (GOA) Family of Documents
- 12/2006 - Reaffirmed 05/2016
- AIR5315: Overview and Rationale for GOA Framework Standard
- 04/1998 - Reaffirmed 05/2016
- AS4893: Generic Open Architecture (GOA) Framework
- 01/1996 - Reaffirmed 05/2016

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Planning for May 2018

- Possible User ½ Day (3 day meeting)
  - Demo of Tradespace Analysis (30m)
  - Demo of Security Analysis (30m)
  - Total 1.0 hours

  - Opportunities to Meet over next year:
  - S18
  - FACE coordination Mid Dec Melbourne, Harris Corp.
  - Embedded Systems
  - Joint Workshop with Ada

Standardization

- News (30m)
- Next Meeting Planning and action items (30m)
- AADL V3.0 topics PF (10 hr)
- Errata Core plus Error Annex PF (1.5)
- Runtime Services JH, EB, BRL (2)
- BA Errata PD, EB, JP, BRL (30m)
- Network Annex Draft (Alexey) (1.5)
- Security Annex Draft (DG) (1.5)
- FACE Annex draft (TS) (30m)

- Total 18.5 hours

- Tutorial RAMSES (2-3 hours)

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AADL Tool Integrations – All - Update Wiki

Frank Singhoff - AADL/Cheddar – through Ellidiss, TASTE, and OCARINA

Jose Mesquer - AADL/MAUDE –

Jean Pierre Talpin/Brian Larson - AADL/Polychrony/Signal with BLESS

Pierre Dissaux - Ellidiss - AADL/Domain System Engineering - Graphical STOOD, Adele, GLASSES, Analysis AADL Inspector, Simulator, Behavior Annex, Error Annex, Requirements Annex.

AADL/Real, Lute, Agree – Integrated into OSATE

Brian Larson - AADL/BLESS

Etienne Borde - AADL/Behavior Annex, RAMSES

AADL/Compass – security & safety analyses, upgraded to use standard AADL.

Peter Feiler, Julien - AADL/SAVI – Updated for V2, extended, new analyses for Safety (FHA, FMEA, Reliability, FTA, Prism) , Simulink to AADL and reverse.

Jerome Hugues - AADL/Mast/Cheddar/FMI … as part of OCARINA Generator

Alexey Khoroshilov- AADL/MASIW – Modular Avionics System Integrator Workplace, plus verification tools.

Rockwell Collins – SysML to AADL, Lute, Agree, Resolute, Spear, QuasiSyn…

ESA – TASTE

D-MILS – Security and Safety with compositional verification and system synthesis

WWT – Editor and analysis tools

SCADE – has added AADL, released commercial version Jan 2018

Dassault Systems – Translator to AADL, Integration with AADL Inspector

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Actions

Action	Date	Lead	OK
Demonstrate FMI/AADL for Sept 25 meeting	1/17	JH	
Trademarks – Bruce will ask Dorothy (author just asks perm)	1/17	BL	x
Exploring Binding software flows to hardware flows, trees of flows	1/17	Alexey	
Example to GITHUB for reverse interfaces	1/17	PF	
Send formula for expressing Arrays to Peter	1/17	BL	x
Send out slides on arrays, consider Brendan's input	1/17	PF	
Unified Type System examples	1/17	LW	

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Actions

Action	Date	Lead	OK
Consider AltaRica feedback to improve EMV2	1/17	PF, LW	x
Send Brian the BNF for transistions, the encoding in SIGNAL	1/17	JP	
Recommendation – Before formalization, lets look at syntax, semantics for runtime services, then go to formalization annotations as a separate annex., Lead effort.	1/17	EB	x
Provide updates and errata for ARINC Annex	1/17	Alexey, Denis	x
Lay out scope of the security annex	1/17	DG	x
Schedule time to discuss tree flows as part of V3	6/17	BAL	x
Organize telecon with Bren and Peter to develop ideas for proposal on arrays	6/17	BRL	

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Actions

Action	Date	Lead	OK
Supply suggested improvements on "refines to" to Peter	6/17	SV	
Set up telecon to discuss with Alexey, Peter, Brendan, Steve the blended use of the error modeling and networking annexes	6/17	PF	
Set up a telecon on the runtime services with Jerome, John, Brian, and Etienne	6/17	BRL	x
Send an example/questions on runtime context variable for accessing ports to Jerome	6/17	EB	
Present upgrades needed to 653 Annex, like additional properties	6/17	SV	x
	6/17		
	6/17		

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BACKUP

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Actions

Action	Date	Lead	OK
Check with Thierry on 653 update (answer - part 4 should be incorporated, part 1 has been updated, later part 5 on multi core) (interest in adding health monitoring (Etienne), more dynamic parts)	3/13	BAL	X
Schedule with Frank for Stephen Presenting (Cheddar, 653 scheduling, patterns, subsets, multi-core)	3/13	BAL	X
Track Analysis updates in AADL Inspector	3/13	PD	X
Update White Paper on Synchronous Annex	3/13	JPT	X
Contribute to Synchronous Annex White Paper (methods)	3/13	JH, BL	X
Update on platform independent code generation and medical domain research (TIMES)	3/13	OS	X
Post bimonthly SEI AADL Modeling Forums on AADL, results to be captured	3/13	JD	X

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Actions

Action	Date	Lead	OK
Contraints (Analysis) Annex – 4 hours for Montreal	3/13	SG	X
White Paper on referencing objects in Declarative and Instance model in OSATE (Eclipse)	3/13	PF with DB	X
Requirements Annex – add definition of contract term usage	3/13	DB	
Send DB Mike Whalen's requirements presentation	3/13	BL	X
EM2 properties concern to be documented	3/13	JH	
Example of explicit propagation with masking to show limited propagation for EM2	3/13	PF	
Discuss Multiple approaches proposed for Unit Relations and Basic Expressions for Unitful Values	3/13	AK, JH, BL	X

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Actions

Action	Date	Lead	OK
Code Generation Annex – two different mappings for subprograms, call sequences, need clarification on data flow	3/13	JH, PD, PF	
Code Generation Annex – legacy component interface integration property	3/13	EB, JH	
Multi core representation guidance needed, set up discussion and write white paper	3/13	JD, S Rubini	X
Set up discussion on Multi-Core – 3 hours for Toulouse	3/13	BAL	X
Lead discussion on Multi-Core	3/13	JH	X
Recommendations for improving consistency of AADL symbols, also behavior and error model representations Graphical Error Modeling Annex started.	3/13	PF	
Need to discuss dependency across annexes, verification of consistency method	3/13	PF	

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Actions

Action	Date	Lead	OK
Errata – discuss Flows and Modes for fault tolerant support	3/13	PF	X
Errata – discuss Contained property associations with Annex fragments	3/13	PF	X
New annex suggestion: ARINC 664 guidelines, Alexey to present his approach at Sept Meeting	7/13	AK, BH	X
Possible annex - FACE interface	7/13	JD	
Subset and Constraint Annex Coordination	7/13	SG, VG, JH, AK	X
Constraints Annex – Can we place contraints on use within a component or where? AK	7/13	SG	
Functional Hazard Analysis name fix in documentation of safety tools in OSATE	7/13	JD	

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Actions

Action	Date	Lead	OK
Update Isolette example model on wiki	7/13	Brian L	X
Add regression test suite to OSATE release mechanism	7/13	JD	X
Provide Adele/OSATE synchronization prototype	7/13	DB	X
Provide experience report with Requirements Annex in Sept	7/13	Brian L	X
Provide simple example in Requirements annex extendable to goal example	7/13	DB	X
Start development of white paper (comparison) and possible draft for Unitful Conversions for Sept	7/13	AK with BL, JH	X
Explicit vs automatic conversion of units example	7/13	AK	X

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Actions

Action	Date	Lead	OK
White paper on multiple bindings to hardware (M Core. Mem) to see if we can improve approach we are using now.	7/13	PF	V3
Review upgrade needed on 653 annex based on Part 4, developing part 5.	7/13	JD	
White paper on nested feature groups, mini annex recommend	7/13	PF	X
Textual syntax for requirements annex – Sept (Brian will give it a try, Peter working on, European project)	7/13	Brian L, DB, PF	
JD will package up Bella Padula for OSATE2	7/13	JD	X
Alexey, Peter, Dominique, Pierre L, Jerome to study the issue of updating the core vs annex in relationship to units, unit type, and the property language, to bring a recommendation for Feb, 2013	9/13	AK	X
Dominique to present SysML units approach and experience using.	9/13	DB	X

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Actions

Action	Date	Lead	OK
Etienne, Jean-Pierre T, Pierre D to develop recommended update to behavior annex with regard to synchronous annex behavior for Feb Toulouse meeting.	9/13	EB	X
Jean-Pierre, Serban to evaluate use of PSL to express synchronous annex constraints for Feb Toulouse meeting.	9/13	JPT	
Etienne to review Errata for Behavior Annex at Feb meeting in preparation for a revision to annex.	9/13	EB	X
Vincent will provide draft subset annex for Feb meeting	9/13	VG	X
Peter will provide draft of error annex for informal ballot, mid November, to be returned mid Jan, for Feb meeting resolution	9/13	PF	X
Add link to OSATE help for making bug reports	9/13	JD	X
Alexey and Jerome will provide an overview of the approaches for specifying AFDX and recommendations for other buses that we might want to provide guidance for specification and analysis.	9/13	AK	X

Actions

Action	Date	Lead	OK
Jerome will provide a recommendation for supporting interrupt events	9/13	JH	
Create a list of benefits/issues related to using SysML vs RDAL for requirements	9/13	DM	x
Brian to present SEI work for Feb Meeting	9/13	Brian L	x
Provide time for PG Polarsys presentation for Feb Meeting	9/13	BAL	x
Schedule presentation with S18 of the safety analysis tools	9/13	BAL	x
Standard properties for tracing requirements to components in RDAL	9/13	DB, PF	

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Actions

Action	Date	Lead	OK
Present Multi-Model Traceability Language by Open People	9/13	DB	X
Present new work with BLESS done with the SEI	9/13	Brian L	X
Mapping of a persistence property for consistency analysis between input and output, must match for consistency	9/13	Brian H, PF	
Check – composite error model at the composite level can have incoming propagations that do not impact subcomponents	9/13	PF	
Function binding to components so errors at component level can fail function and hazard analysis bottom up	9/13	PF	
Brendan – we want "refines to" in the syntax	9/13	PF	
ARINC 653 has Multi-Core working group – contact TC	2/14	JD	

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Actions

Action	Date	Lead	OK
What timing/performance for processors should we support – reference, measure, mips? Peter to provide slides.	2/14	PF	x
653 timeout associated to ports – do we need a timeout port property to wait added as part of the Core. Alternatives?	2/14	PF, JD	
Publication permission for Joint research reports	2/14	JP, BAL	x
Splitting 653 annex properties into two parts, second for implementation dependant. Need errata?	2/14	JD	
Request for Peter to give a presentation on FMEA and the stepper motor.	2/14	PF, BAL	x
Dominique to study Peter's recommendations (slides) and tech report for RDAL, Jerome as some related activities	2/14	DB, PF, JH	x
github for version 2 of RDAL needed	2/14	DB, JD	x

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Actions

Action	Date	Lead	OK
Dominique to present gobal model management	2/14	DB, BL	X
RDAL textual syntax – send to Peter what you have	2/14	DB, Brian L	X
Error model annex - Provide summary of how the core error reporting and annex errors interrelate.	2/14	PF	
Error annex issue of terminology in different domains – write up guidance for understanding.	2/14	PF	X
Given write up on terminology - ask Alex Boydston, PL review	2/14	BAL	x
Need config file description for VxWorks, new ARINC653 standard, see if available.	2/14	EB	x
Virtual buses and processors – Investigate end to end flows in the hardware and the containment and connection of virtual buses.	2/14	PF	V3

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Actions

Action	Date	Lead	OK
Concept of treating the core as two languages, the architecture and properties. References should be available throughout model space.	2/14	PF	V3
Unit types - Need to express evaluations that have a formula. Modelica as an example.	2/14	AK	V3
Flesh out additional rules for "implemented as"	2/14	AK, PF	V3
Recommendation for laying out virtual memory	2/14	AK, PF	V3
Uniform way to do compute from different contexts	4/14	PF	
Email to S-18 about Chicago and San Diego (Julien Chicago?)	4/14	BAL	x
Develop predeclared error behavior state machines for Annex	4/14	PF	x

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Actions

Action	Date	Lead	OK
Provide contacts for textual RDAL at Cantabria	4/14	DB	x
Provide textual RDAL ideas, examples to Peter	4/14	BLarsen, DB	x
Provide example large assurance case to Peter and Dominique	4/14	BLarsen	
Provide papers on verification task to Dominique	4/14	PF	x
ARINC653 update to style used in BA with traceability	4/14	JD	x
RDAL needs concept of negative requirements	4/14	PF	x
Send email to chair of S-18 for Spring Meeting	7/14	BAL	x

Actions

Action	Date	Lead	OK
Start second ballot for Error Annex with Code Generation	7/14	JD, BAL	x
Discuss doing Julien's AADL webinar for upcoming meeting	7/14	BAL	x
Request TASTE tutorial for Valencia	7/14	BAL	x
Interaction between BLESS, Assertions and Agree, set up discussion.	7/14	BAL	x
Telecon to start network architecture discussion and determine presentation	7/14	AK	x
Add pre-defined error state machines to Error Model Annex	7/14	PF	x
Send Peter a list of variations in exposure time, ARP 5107	7/14	BH	

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Actions

Action	Date	Lead	OK
Contact Bill Flecher and Brendan Hall for uses of "Time Limited Dispatch for EA	7/14	PF	
Contact Darren Cofer to get input on security types for EA. Forward current draft of Security Annex.	7/14	BAL	
How is SysML handling having one link that goes two places, a multicast link.	7/14	BH	x
FACE data modeling for integration into a partition. FACE 3.0.	7/14	JD	
Update the ARINC653 annex for the next ballot	7/14	JD	x
Schedule a demonstration of AADLlite using Subsets Annex	7/14	BALS	x
Sets vs lists – provide example of when needed	7/14	AK	x

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Actions

Action	Date	Lead	OK
Coordinate with Open Group, SAE, Brazil for San Diego mtg	10/14	Bruce	x
Draft Documents on SAE standards work area, keep wiki (should do with a link to the wiki on SAE site)	10/14	Bruce	x
Table of tools and website links (link to wiki)	10/14	JD	
Synch Annex - Open Source toolset building on Behavior Ax	10/14	JPT	
Synch Ax – Clarify impact on core, behavior, constraints Ax	10/14	JPT	x
Synch Ax RT and logical constraints integrate, constraints Ax?	10/14	JPT, SG	
Synch Ax – clarify inheritance of behavior in a thread	10/14	JPT, DB	

Actions

Action	Date	Lead	OK
Error Ax – expression language useable on all annexes	10/14	PF	V3
Error Ax – distributions more general than fixed	10/14	PF	
Future ballots – can we also send and edit PDF as well as Word	10/14	JD	
653 Ax –generalize intro to cover MILS, mixed criticality	10/14	JD	
653 Ax – Check if Car Mel has subscription to ARINC stds	10/14	JD	x
Analysis contracts – update committee on implementation	10/14	DD, JD	
Errata for core – inconsistent starting points for paths	10/14	PF	x

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Actions

Action	Date	Lead	OK
Errata for core – Usefulness of default values	10/14	PF	
Errata for core – Transfer of aggregate data as a protocol?	10/14	PF	
Errata for core – name paths need unified syntax	10/14	PF	V3
Net Ax – provide training example of two network analyses	10/14	AK	
Net Ax – provide ex AFDX net architecture difficult issues	10/14	AK	
Net Ax – provide example ICE network, similar to TTA	10/14	BL	
V 2.2 – usefulness of private package sections, check w SAVI	10/14	Bruce	

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Actions

Action	Date	Lead	OK
Hybrid Ax – need example cont time vs AADL thread dispatch	10/14	Eshan, BL	
BA – need white paper to change D.5-04	10/14	Denis	
BA – D.6-09 – ask for rational from Mamon	10/14	EB	
Verify that last ballot passed.	2/15	BAL	x
Redefine Ballot Pool	2/15	BAL	x
Integrate document for publication	2/15	JD	x
Resolve BLESS issues with Core, BA, and Code generation	2/15	BL	

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Actions

Action	Date	Lead	OK
Provide network (TTE, 664) properties and links for scheduling, safety protocols	2/15	BH	
Open group - Formalized Assurance Cases – DEOS runtime monitoring - assurance in safety and security	2/15	BAL, PF, Rance D, Joe B	x
Synch/BA - Immediate connection to data ports only vs queue of one, should we allow both?	2/15	PF, EB, JP	
Constraint Annex – Review actions relative to control of execution of theorems for testing and assurance cases	2/15	SG, PF	
Constraint Annex – "applies to" at the theorem or viewpoint	2/15	SG, PF	
Constraint Annex – send to Mike Whalen, Brendan Hall	2/15	SG	
Constraint Annex- review relationship to assurance case, behavior, simplification, relation to RDAL	2/15	PF, SG	

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Actions

Action	Date	Lead	OK
Graphics-need graphical specification of flows and flows for error propagation, color coding, ability to tweak autolayout	2/15	PA	
Requirements – issue between X-text and Extend, need to develop best infastructure, may impact OSATE, RDAL	2/15	PF, EB	
Provide pointers to create references into the use case	2/15	DB	
Error Model – note to be provided that gives examples of exposure time and exposure instances,	2/15	PF	
Error Model – map two examples of communication between annexes. AADL vs SLIM	2/15	BH	
Error Annex interaction with Behavior/Hybrid Annex. Set up time to discuss at next meeting.	2/15	BH, PF, BL, PD	
EMV2 elements are inherited and can be overwritten, but not documented in EMV2 text	2/15	PF, AK	

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Actions

Action	Date	Lead	OK
5506B has been updated on wiki for two years, need to update document.	2/15	PF,	x
Migrate SEI properties to property sets reflecting purpose, All send what you think is useful.	2/15	PF	x
Recommendation on properties for internal features	2/15	PF	
Multi-core processors – develop white paper on nesting of processors if needed.	2/15	JD	x
Multi-Core – leave for V3.0 discussions.	4/15	AK, JD	V3
Data Modeling Annex – add processor types like endianness	4/15	JH	
Data Modeling Annex – provide bit stream example, work text with Bruce, expressions in property strings	4/15	JH	

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Actions

Action	Date	Lead	OK
Add time stamp property to Network Annex.	4/15	TR, BH	
Scheduling protocol inherit list with defined semantics	4/15	PF, DD	
Arrays with another input form so you can copy and paste	4/15	PF	
Brendan requesting early draft of synchronous updates to BA	4/15	JP	
Myron will see if he can provide example of processor synch	4/15	JP	
Conditional And, Or support in the BA – need to make it precise	4/15	EB, BL	
Functional invocation needed in the BA, Brian will provide example	4/15	BL, EB	

Actions

Action	Date	Lead	OK
BA – Assignment of Any – Brian will check with Mamoun	4/15	BL	
BA- Subprogram Invocation – consider further	4/15	EB	
All, send BA comments to Etienne, Pierre will test syntax	9/15	EB, PD	x
BA must sense error and raise it, need example, define semantics for this internal event	9/15	EB, PF	
Etienne, Brian, JP to work BA integration, JP building a tool environment Quegen over next two years, Formalization target async, sync and timed systems	9/15	EB, BL, JP	x
Short term – skeleton for BA, longer term merged semantics	9/15	EB, BL, JP	x
Peter to all, virtual contains channel and protocol, please provided why we need both channel and virtual bus	9/15	PF	V3

Actions

Action	Date	Lead	OK
Brendan to have webex with Peter, Pierre to explore the suggested array solutions.	9/15	BH	
V3 - Peter to determine if we can do state machines aka state variables	9/15	PF	
Need textual system instance model	1/16	PF	x
Ports on buses and memory to trigger modes, can inherit the mode if has enclosing entity, senses failure and changes internal mode	1/16	PF	V3
Ability to instantiate types (as well as classifiers)	1/16	PF	
Brendan will send Peter example of single and dual channel brakes for configuration. Configuration should not touch modes.	1/16	BH	
	1/16		

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Actions

Action	Date	Lead	OK
Ask Pierre G about availability of output from CAPULA project	7/16	Bruce	x
Refinement of categories and features (for abstract), can we eliminate this?	7/16	AK	
Nice in Summer or Winter, coordinate with Frederic Mallet	7/16	Bruce	x
Paper summarizing Textual Instance model, to move to std	7/16	PF	
Implemented As, developing concept for V3 with PD	7/16	PF	
Examples of Refinement for patterns issues send to Peter	7/16	AK	
Device not well defined as a physical thing, list examples in Std, to be resolved in V3	7/16	PF	

Actions

Action	Date	Lead	OK
Provide example of parameterization of the outer part, the project, for configuration to Peter	7/16	PD	
Physical feature that can handle continuous time, review D-MILS approach	7/16	Brian L	
Need paper that summarizes Textual Instance Model, should it be standardized?	7/16	PF	
Follow Compass to evaluate their Hybrid Annex for standard	7/16	Brian L	
New release in Oct 2016 of Compass, Availability?	7/16	Bruce/TN	
AFDX is a trademark of Airbus, ARINC 664 part 7 the same, how do we get permission to reference	7/16	Bruce	x
Network Annex question on specifying a driver in a partition, Get with Julien and Jerome for ideas	7/16	AK	

AADL

Actions

Action	Date	Lead	OK
Ideas for driver for network, how to specify, check with Julien and Jerome	7/16	Alexey	
Ballot V2.2 Add example of use of abstract for physical mechanical, electrical type representation	7/16	Peter	
Ballot V2.2 errata – need way to describe runtime call from AADL to support timeout, should be abstract enough	7/16	Brian	
How can we standardize the way we determine the root instance, project level definition?	7/16	PF, PD	
Assurance Case Demonstration for next meeting	10/16	PF	x
Physical Features proposal	10/16	BL	x
Alignment of spec sheet for variants with component type example	10/16	PF	

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Actions

Action	Date	Lead	OK
Provide generic properties for switched networks set to Alexey	10/16	JH	
Provide several additional properties for switched networks needed to Alexey	10/16	SV	x
Provide current TTA definition to Brendan for his review	10/16	AK	
Provide Steve Vestal with where he can find errata status	10/16	PF	x
For/forall – would not have to be an integer, provide example of interacting over a list of records with grammar definition	10/16	DB	
Handling of trademarks in the standard – permission from ARINC(664) and Airbus (AFDX), who handles.	10/16	BL	x
Safety layer description for Networking Annex example	10/16	BH	

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