

# ES<sup>2</sup> 2011 Programme SW Safety Assurance WS – BLED Wrap -up

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# [ES]<sup>2</sup> 2011 Programme

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TITLE	CONTENT	TARGET AUDIENCE	DATES	LOCATION
<i>WS 1-11 Governance &amp; Cost of SMS</i>	Safety Key Performance Indicators-KPIs & Analytical Hierarchical Process-AHP Cost of SMS and Safety Targets	Safety managers Line Managers Safety Specialists (OPS & TECH)	15-16 March	Brussels EUROCONTROL HQ
<i>WS 2-11 FAB Safety Case FAB Safety Roadmaps &amp; KPIs</i>	Presentation and discussion of FAB safety Cases and/or Unit Safety Case options by ALL FABs FAB Safety Roadmaps and Safety KPIs	FAB Safety WP Leaders Safety Managers FAB Projects Managers	18-19 May	Sarajevo Bosnia&Herzegovina Hosted by BHDCA
<i>WS 3-11 ESARR6/ESARR4 (EC482/2008 and EC2096/2005 and emerging EASA related rules)</i>	Software Safety Assurance & Degraded modes of Operations FAB Safety Case	Safety managers Line Managers Safety Specialists (OPS & TECH)	21/22 September	Bled/Slovenia Hosted by Slovenia Control
<i>WS 4-11 CEOs Meeting SMS in Operation and SMS Interface btwn ANSPs and NAAs</i>	Annual [ES] <sup>2</sup> Report & Priorities for 2011 Weight of Safety in decision making and SMS interface between ANSPs and NAAs FAB cross-culture driven improvements	<u>CEOs</u> Safety Directors/Safety Managers Safety Specialists (OPS & TECH)	27-28 Feb 2012	Limassol Cyprus Hosted by CY DCA

20-22 June Brussels ECTRL HQ - AHP Training with Prof. Saaty from Pittsburgh Univ

•Day 1 – 21<sup>st</sup> September 2011

09:00	Welcome and introduction- Slovenia Control & EUROCONTROL (Beno PAČNIK Slovenia Control Rep and Tony LICU - ECTRL)
09:30	Session 1: Setting the scene (ESARR 6 and EC 482/2008) •ECTRL DSS/OVS – Jean Michel DE REDE •EASA – Emilio MORA-CASTRO
10:15	<i>Coffee break</i>
10:45	Session 2: ANSPs view – DSNA – Yan CARLIER
11.30	Session 3: Manufacturers views – THALES – Dominique VERNOS
12:15	<i>Lunch break</i>
13:45	Session 4: ANSPs view - NAV Portugal – Paula SANTOS
14.30	<i>Coffee break</i>
15:00	Session 5: EUROCONTROL ARTAS – David MORTON and Johannes DE HAAN
15:50	Session 6: Degraded Modes of Operations for Operational Engineering (SW related issues) Prof. Chris JOHNSON – University of Glasgow
16:45-17:00	Wrap up of Day 1
19:00	SLOVENIACONTROL Dinner

# ES2-WS3 – Bled – Day 2

•Day 2 – 22 September 2011

<small>EUROCONTROL</small> <b>09:00</b>	Session 7 ANSPs view – Maastricht UAC – Herman BARET
<b>09:45</b>	Session 8: Manufacturers view – Indra – Juan DIZ
<b>10:30</b>	<i>Coffee break</i>
<b>11:00</b>	Session 9: ANSPs view – NATS – Roger DILLON & Bob GRANVILLE
<b>11:45</b>	Session 10: Training perspective – IANS - Vincent SCHIFFLERS
<b>12:15</b>	Wrap up of the SW Assurance part of the workshop – ECTRL Fred LIEUTAUD & Tony LICU
<b>12:45</b>	<i>Lunch break</i>
<b>13:45</b>	<b>FAB Safety Case Follow up (all you &amp; Fred LIEUTAUD, Tony LICU; Alex KRASTEV, JM de REDE, Ivana BUSIC)</b> -Review of Sarajevo outcome -Round table with what progress was done by every FAB (5-10 min max each FAB) -Proposed draft Checklist for FAB Safety Assurance Submission to EC -Regulatory review principles
<b>15:00</b>	<i>Coffee break</i>
<b>15:30</b>	<b>FAB Safety Case Follow up</b> -Review of Sarajevo outcome -Round table with what progress was done by every FAB (5-10 min max each FAB) -Proposed Draft Checklist for FAB Safety Assurance Submission to EC -Regulatory review principles •Cont'd
<b>17:00</b>	<b>Closure</b>



## Wrap up and follow-up

- Fast track ongoing; Regulatory Taxonomy (IR, AMC, CS, GM);
- By 2013 we need to understand the impact of new regs if any
- Different ANSPs, different approaches (i.e. “AMCs”);
- Manufacturers have a tailored approach to cope with various depth of requests and complexity of ANSPs;
- ED153 and ED109 the most frequently mentioned – but they are still @ very high level;
- Interface/interaction ANSPs/Manufacturers:
  - How should safety requirement issued from the IRs be considered in the global system/equipment safety assessment?
  - When or how compliance to objectives can be determined?
  - How can we get a better/common (ANSP/Manufacturer) view of what we really need to do to show compliance to EC482?
  - What should be the content of EC 552 declaration of conformity in relation with safety assessment?
  - Roles and responsibilities in providing SW requirements and SW assurance.



## Wrap up and follow-up cont'd:

- How can one give a satisfactory answer to all the regulation requirements using:
  - The results of the safety analysis integrated with
  - The outputs of a good software engineering practice
- COTSs (do we have enough in GM, EDs etc)
- SWALs (do we have enough in GM, EDs etc)
- Degraded modes of Operations – complementary to the “design & implementation” SSA.
  - operations and engineering concerns and issues about protection of degraded mode (as redundancy doesn't cover all safety issues, like corruption of data)
  - engineering awareness (scaring stuff), and
  - directors awareness as well
  - degraded mode as a system including common point of failure and not as single component (like sw)
  - lessons learn from ENG and not just OPS



## Wrap up and follow-up cont'd:

- Maintenance;
- Legacy vs. New SW ;
- Input to EASA groups dealing with SW and Safety Assessment
  - Need to work with EASA to support the SW oversight harmonisation;
  - Need to have a forum to share best practices and clarify role, responsibilities of each party (including NSA) and support each other;
    - Involve more NSAs;
  - Integration of other activities HF, security in one pack !
  - How to avoid having “regulator focused documents”, i.e. Documents made just to please the regulator?
- Documentation for SW assurance (format vs. content)
  - For auditors?
  - To say it's done?
  - To archive?
  - For someone to use?



## Wrap up and follow-up cont'd:

- We propose to use IANS platform (Vincent) – (similar like for FABs after WS2 2011– sharing this time the SW intelligence);
- Integrate the best practices in SAF-SW course;
- Come back in “plenary” with the forum in ES2 WS (spring 2013).

~ 62 participants from 34+ Organisations  
(ANSPs, NSAs, Manufacturers – Thales, Indra  
EUROCONTROL, EASA, Univ. of Glasgow)