



STAC

ECAC and STAC Testing of Security Equipment

ALDSA08,

24-25 October 2012

Northeastern University, Boston

By Jean-Claude GUILPIN



Conclusions

- The European Civil aviation Conference (ECAC) developed a Common evaluation process of aviation security equipment
- This process evaluates equipment against ECAC / EU standards and provides results to 44 ECAC Members states for their national certification task
- The process is related today to EDS ; LEDS ; security scanners (AIT), and should be extended along the development of Common testing methods.
- STAC (DGAC/France) is one participating test centre to the CEAC CEP Process



What is ECAC?



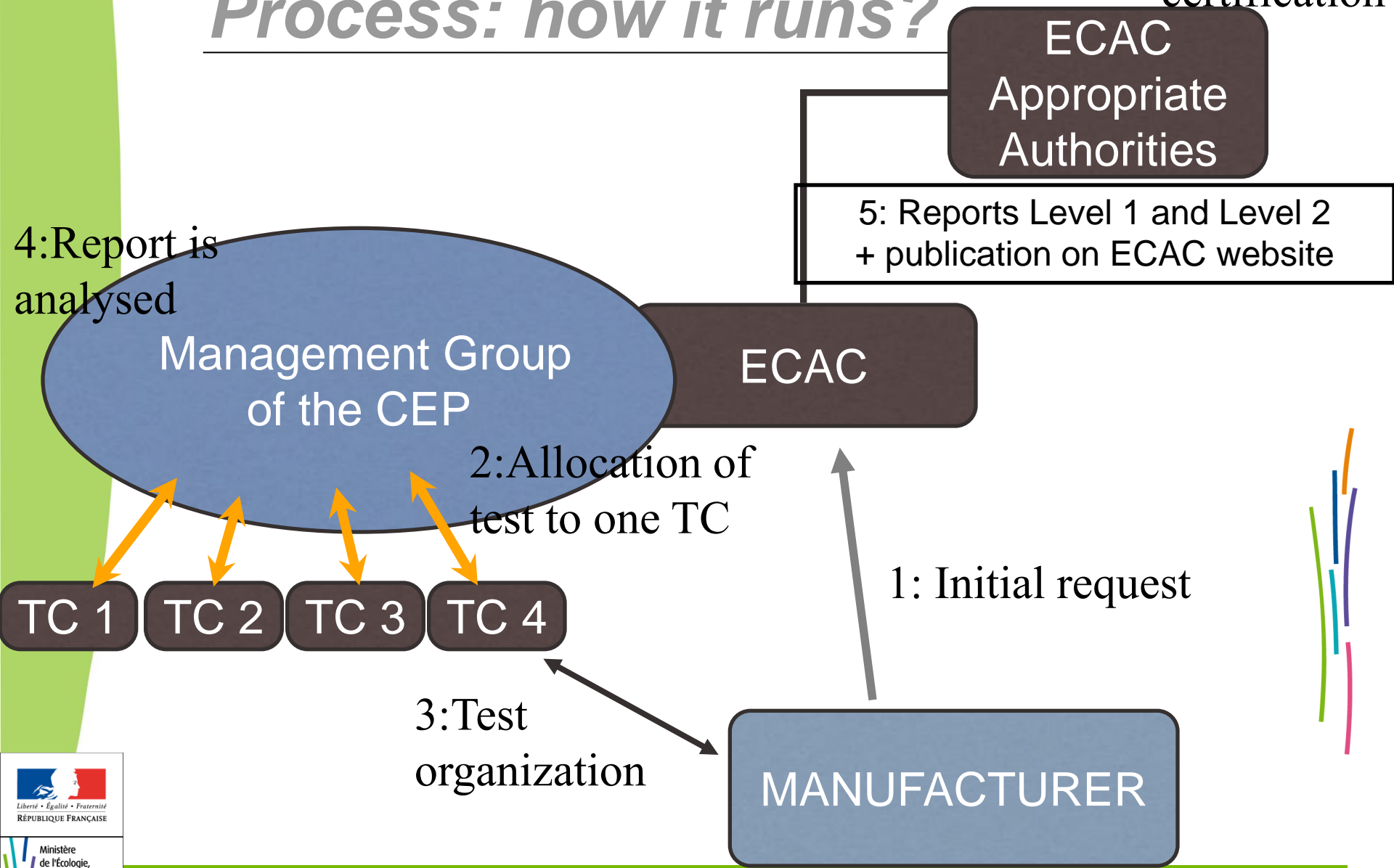
ECAC Versus EU Commssion

- 2 different institutions
- EU regulates civil aviation since 2002 (“Shall”)
- ECAC establishes RECOMMENDATIONS (“Should”) since 1955 on all aspects of civil aviation.
- ECAC : European regional organisation under ICAO umbrella

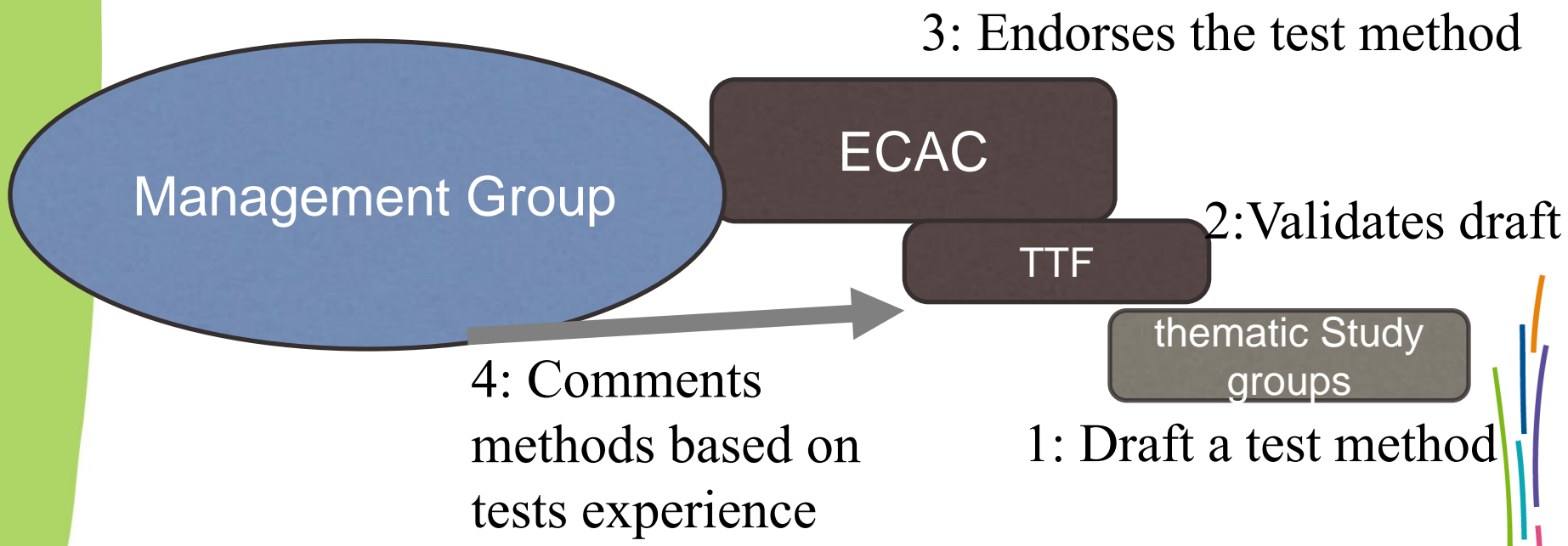


ECAC Common Evaluation Process: how it runs?

6: national certification



ECAC CEP: how test methods are elaborated?



3 types of testings

- Full test = a TYPE of equipment is evaluated against a standard of the ECAC DOC30 (identical to EU Aviation security regulation standards)
- Simulator re-test
- Configuration change management



Full test

- Type of equipment to be identified
- CONOPS to be provided
- Detection rates against threats
- Threat sample are a subpart of the threat describe in the regulation
- Manufacturer doesn't know the threat sample
- Manufacturer doesn't record data
- Raw data are kept by the test centre
- Limited feedback to manufacturer



Simulation re-tests (1/2)

A simulation re-test may be possible if:

1. The proposed change only affects the software
2. Data has been stored during the original tests
3. A simulator is available
4. There are no hardware or other changes that cannot be simulated



Simulation re-tests (2/2)

To utilise a simulation test:

1. Data must have been recorded from an original system that has the same hardware and conops
2. The simulator software must be verified, using a verification set of data (details as part of the CTM)



Example of LEDS

CEP classification (not part of the standards)

- Type A- individual containers are opened and their contents sampled.
- Type B- individual containers are screened with no requirement to sample the liquid directly.
- Type C- multiple containers are screened simultaneously (e.g. containers in a tray).
- Type D- container(s) can be screened whilst remaining in a cabin bag. (methodology for testing with large electronic items together with liquids has also been developed, although current EU Regulation does not allow their use)



Summary of progress so far

- For LEDES 50+ tests have been completed since 2010
 - Full tests
 - Simulator Re Tests
 - Configuration Change Management requests can now be considered
- As of May 2012 there are 42 systems that have met a Standard:
 - Type A = 8 systems (1x Std 1 and 7x Std 2)
 - Type B = 13 systems (5x Std 1 and 8x Std 2)
 - Type C = 19 systems (12x Std 1 and 7x Std 2)
 - Type D = 2 systems (1x Std 1 and 1x Std 2)



Range of technology

- Dielectric
- X-ray
- Infra Red
- Raman
- Test-strips & wet chemical tests
- Computed Tomography





STAC

Thanks for attention



Jean-Claude GUILPIN
STAC/SE/Security division
jean-claude.guilpin@aviation-civile.gouv.fr
+ 33 1 49 56 81 34