

RFID and CMB Standardisation activities within BNAE

Why standardise?

15/09/2010

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BNAE

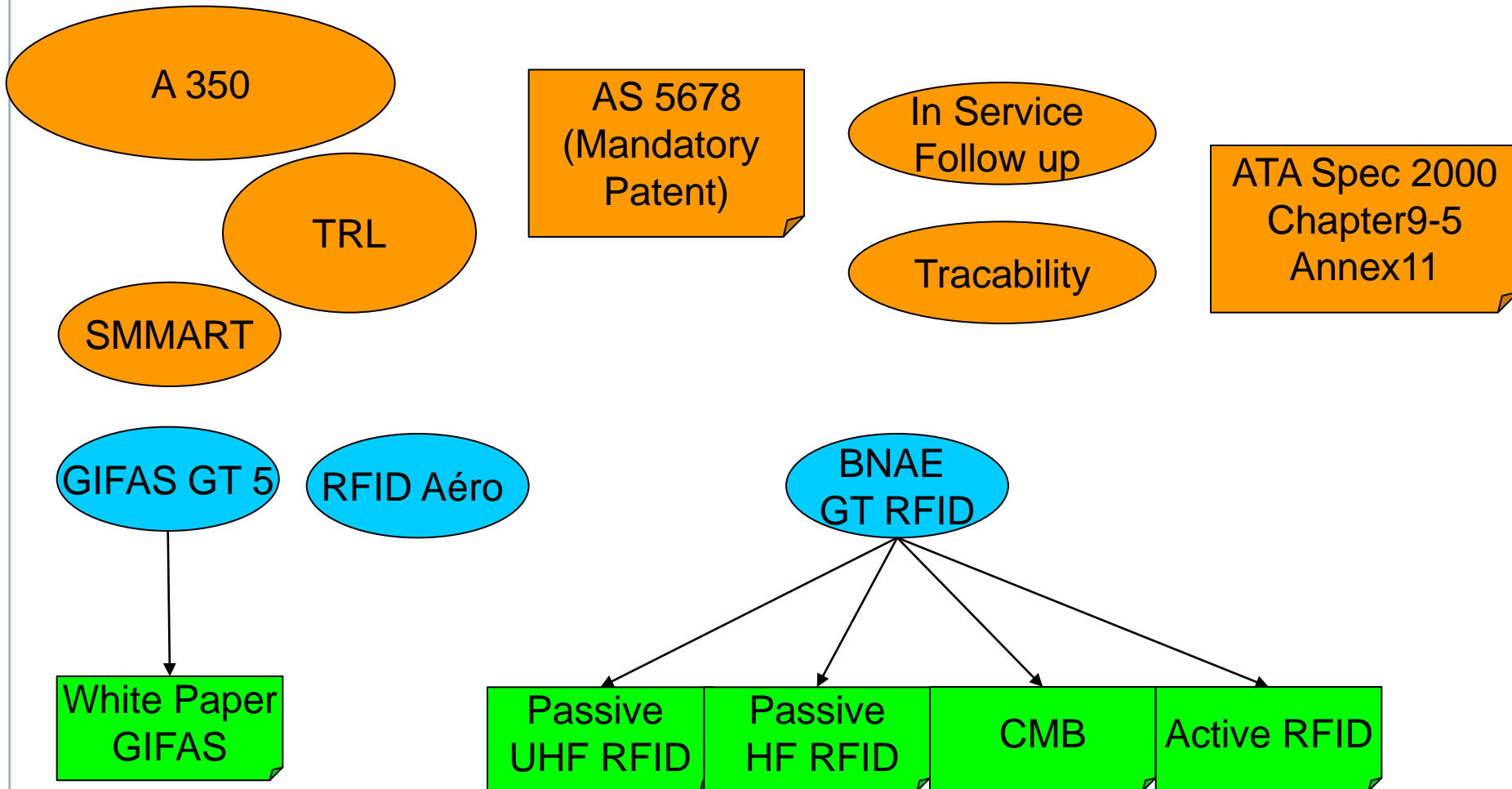
- The French Standardisation Office for aerospace
- BNAE is a non profit organisation under the French law
- **Members :**
 - GIFAS,
 - Major aerospace firms (EADS, Dassault, SAFRAN, etc.),
 - CNES,
 - Ministry of Defense (DGA),
 - ONERA,
 - Ministry of Transportation (DGAC)
 - Aéroport de Paris, Bureau Véritas, Inéo (groupe Suez)
- **Purpose :**
 - To promote standardization in the studies and construction in aeronautic and space activities
 - To assume the conduct and development of the work involved
 - To combine the efforts of manufacturers;
 - To address issues related to national and international in compliance with official guidelines on the subject .

Why standardise ?

- In the absence of standards, different technologies coexist which can lead to
 - Technical complexity issues
 - Higher Cost
 - Less interoperability
 - Less security

=> loss of efficiency
- Standardisation enables
 - Pre contract
 - Export control management
 - Common Technical Background
 - Commercial pre agreement
 - Ease of negotiation (Mutual adjustment between users and providers)
 - Common explicit language
 - Reactivity (Programme Lead Time versus Standardisation Lead time)

Context

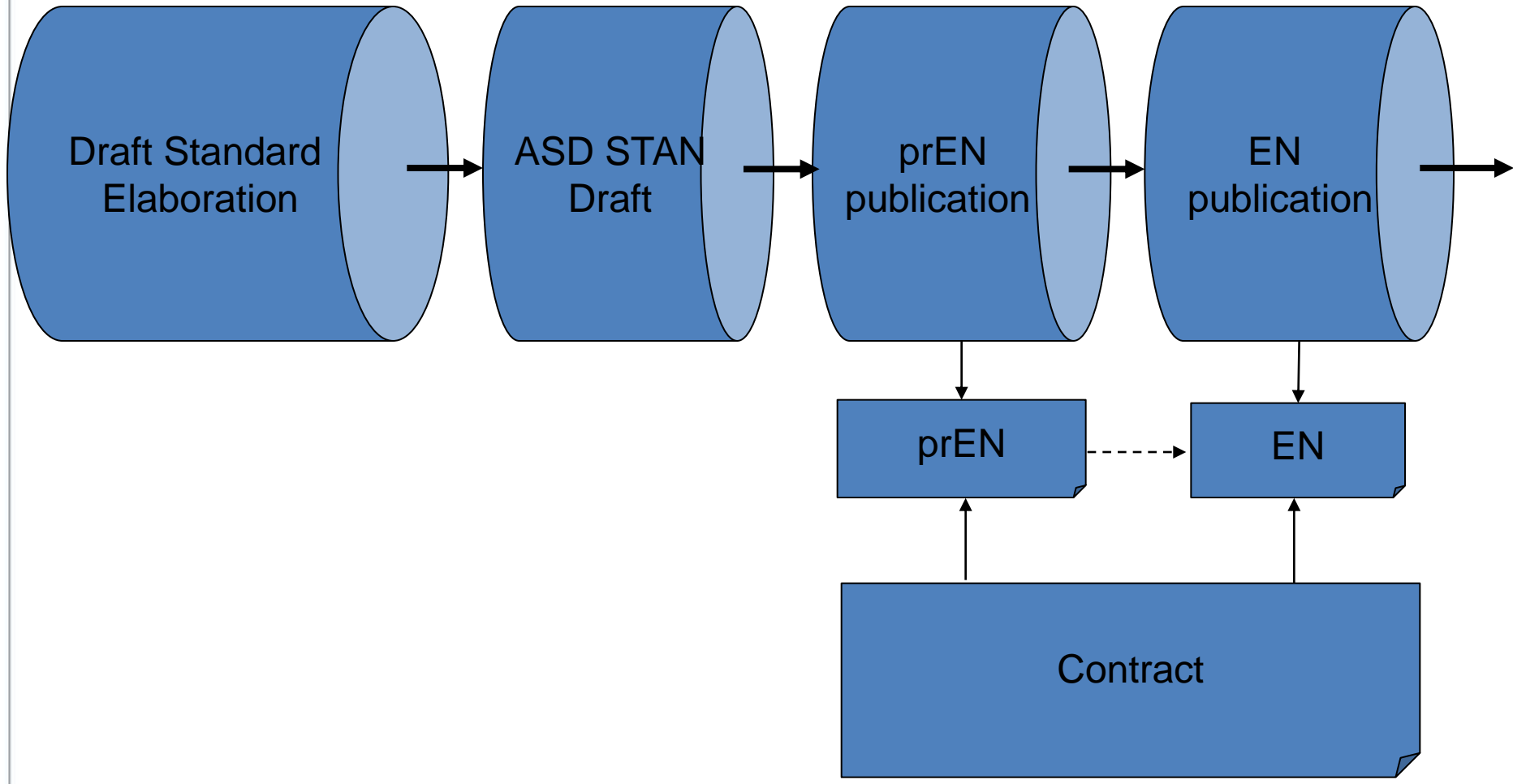


BNAE RFID WG members



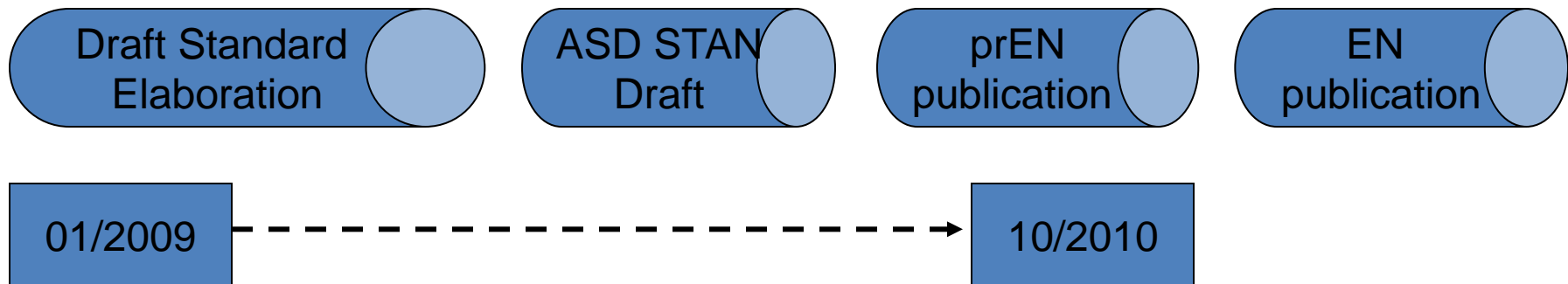
- **Main members :**
 - SNECMA
 - EUROCOPTER
 - TURBOMECA
 - SAGEM DS
 - TITANOX
 - DASSAULT-AVIATION
 - AIRBUS
 - Centre National RFID – CN RFID
 - THALES
 - TECHNOFAN
 - MICROTURBO
 - MESSIER-SERVICE
 - MESSIER-BUGATTI
 - SNECMA PROPULSION SOLIDE

Standard Elaboration Process



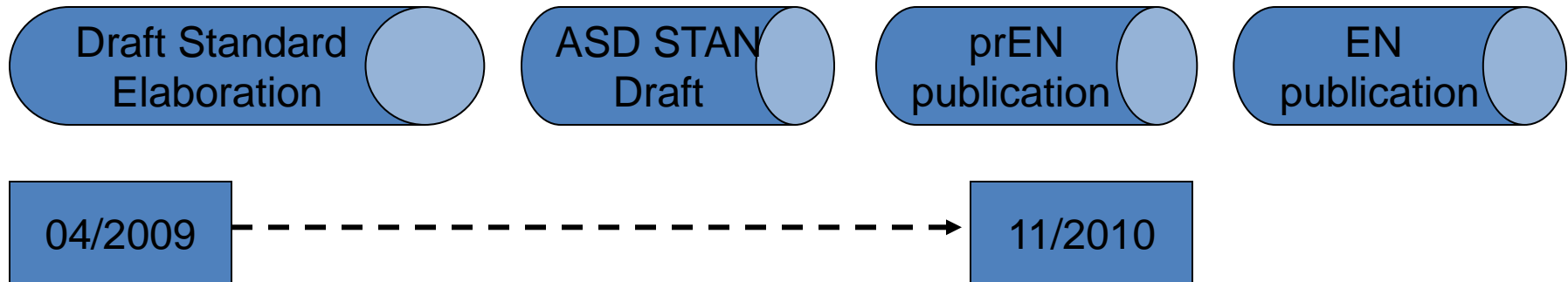
Passive UHF RFID

- Standard developed as an alternative to **AS 5678**
 - AS 5678 drawbacks
 - EPC Global protocol and patents
 - Proprietary solution for antenna



Passive HF RFID

- No available Standard
- Complementary Technology to Passive UHF : plan B

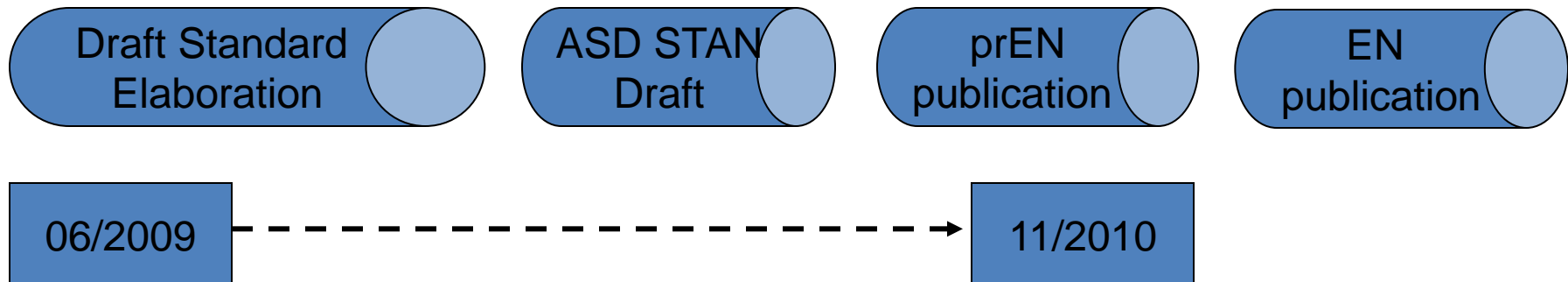


Contact Memory Button

- Communication by contact
- Suitable for harsh environment (skydrol, fuel, salt, chemical, nuclear, ...)
- High memory capacity
- Very long time storage for data
- Already used by US DoD (Aircraft,...)& NATO...(TRL ok)
- Non detectable concerning EMC

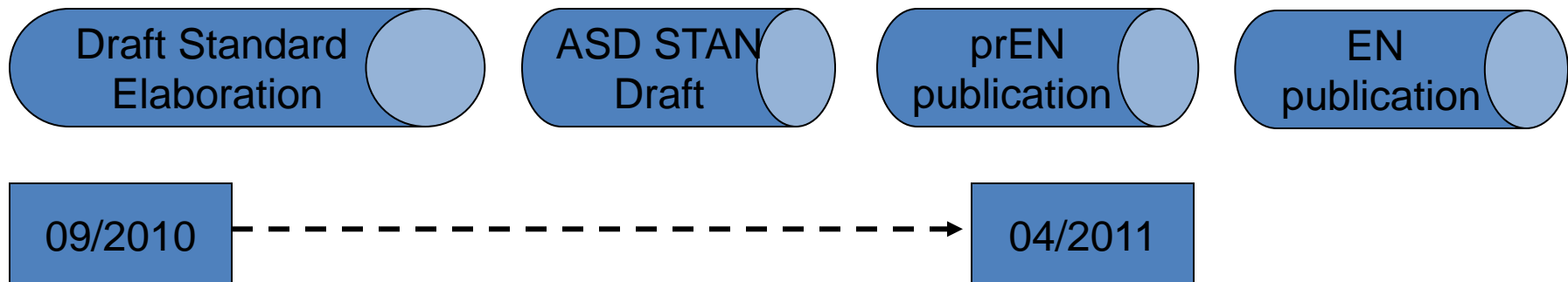


=> Suitable for aeronautical/spatial, defense & security activities



Active RFID

- Alternative to project of AS 6023 standard
- Availability of an European domestic standard
- Availability of a standard dedicated to :
 - Geo localisation in large areas
 - In service follow up of Equipment (recording of data coming from detectors measuring shock, pressure, temperature ...)



Regulation / Standardisation

RFID/CMB use on civilian aircraft must be justified as usual to conform with certification regulations according to the intended use and the non interference with other systems

EASA : draft policy
Memorandum
concerning passive RFID

- FAA : AC 20 162 : offers guidance
on installing & using RFID on aircraft
- One Provider has obtained : 8110-3
: Statement of Compliance
with the FAR for the use of CMB

Standardisation minimizes
the need of multiple
justifications to obtain
type certification

Perspectives

- **Organize meetings between industrial experts and business experts with the BNAE RFID working group**
 - Identify data structures tailored to specific issues :
 - Configuration Management
 - Reliability, Availability, Maintainability and Safety
 - In service Follow up
 - Diagnosis and Test
 - Specify other usages

- **Organize promotion of standards among Clusters :**
 - PEGASE : RFID Aéro
 - ASTech & Aerospace Valley

- **Organize promotion of standards among providers of RFID and CMB**