



# EASA

European Aviation Safety Agency

# Interface between the State of Design and the State of Manufacturing

**Mark KIEFT**

**EASA Certification Directorate: international coordinator**

**16 Nov 2017**

**Your safety is our mission.**

An agency of the European Union 

TE.GEN.00409-001



# Outline

- Use of Bilateral Agreements or Working Arrangements for mutual recognitions of Design and Manufacturing Systems
- SoD, SoM, SoR
- Split SoD / SoM responsibilities at 3 levels
- Design / production interface issues
- The advantages of BASAs / working arrangements
- EASA's system

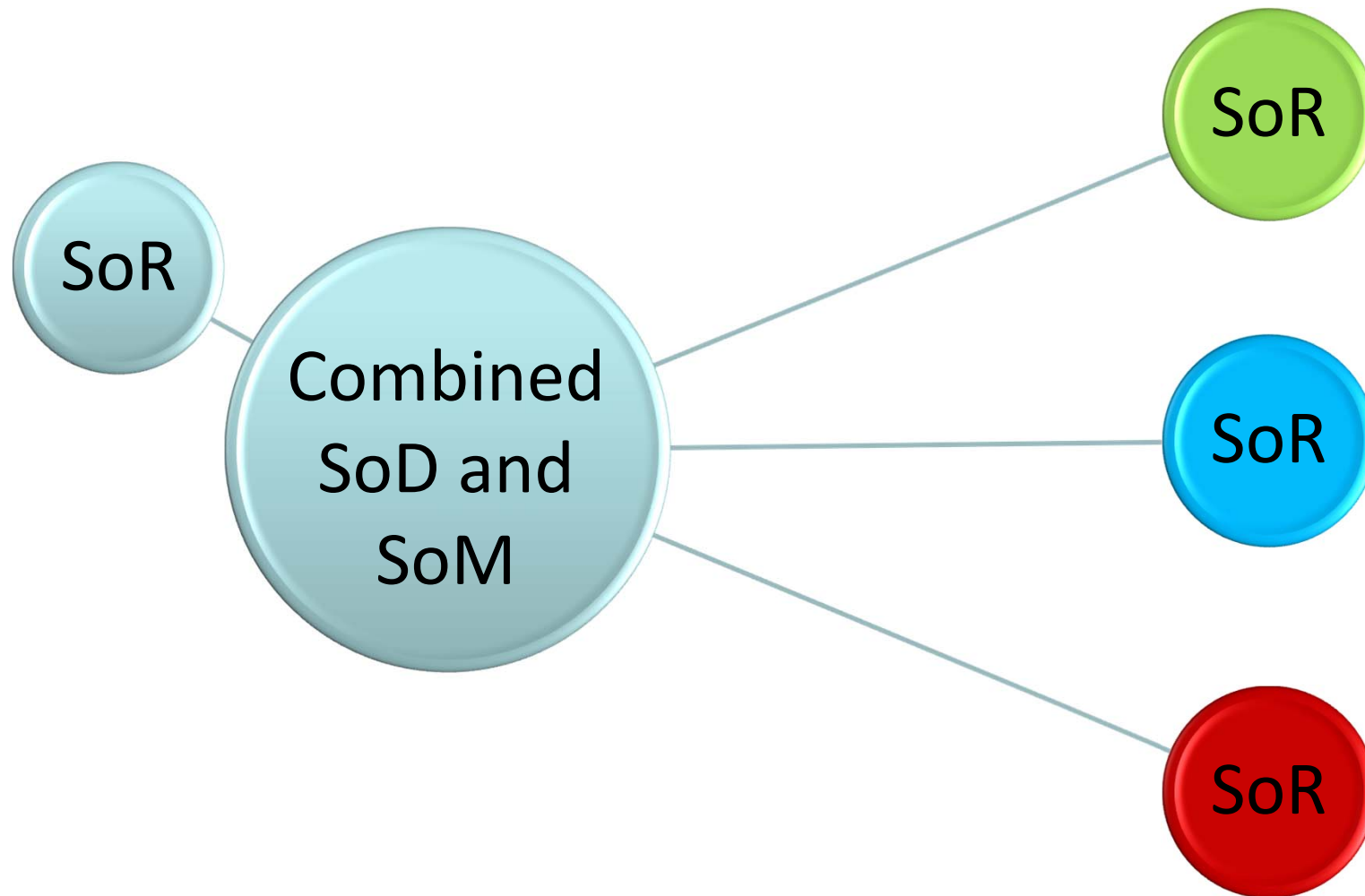


## Definitions - ICAO

- State of Design: The State (country) having jurisdiction over the organisation responsible for the Type Design of an aircraft
- State of Manufacture: The State (country) having jurisdiction over the organisation responsible for the Final Assembly of an aircraft
- State of Registry: The State (country) on whose register an aircraft is entered
- State of Operation – n/a

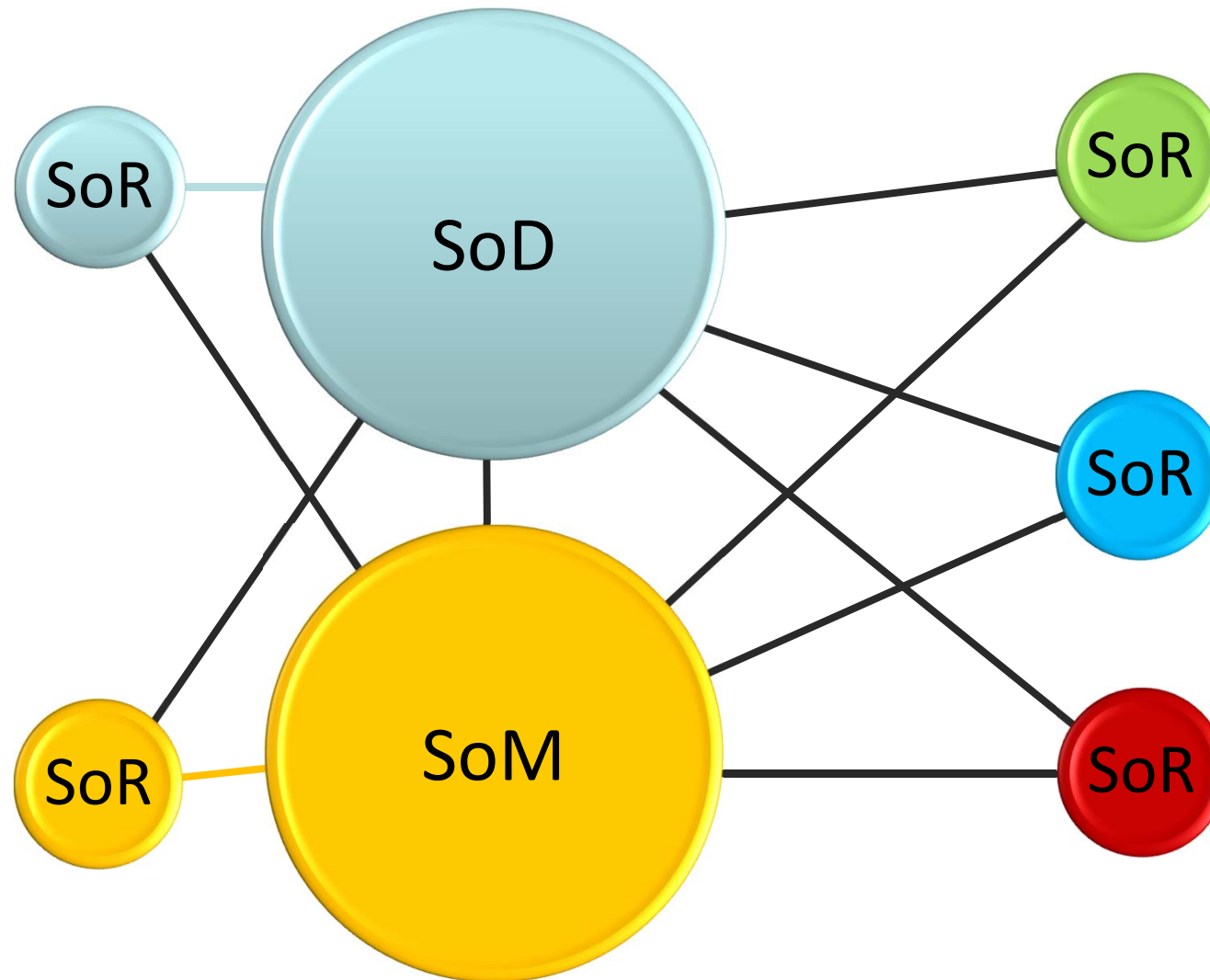


## Simple case. SoD = SoM





## Split case. SoD $\neq$ SoM





# Interfaces with split SoD and SoM - 1

At State level – the two States need an agreement to accept each others design systems and/or production systems:

- Could be a BASA
- Could be a working arrangement
- Could be a legal provision in the regulations
- Could be a unilateral declaration



## Interfaces with split SoD and SoM - 2

At NAA level – the two authorities need an interface document to ensure full coordination on the oversight of the complete design/production/continued airworthiness system.

**No gaps; no duplication:**

- Could be Implementation procedures (TIP)
- Could be a working arrangement



## Interfaces with split SoD and SoM - 3

At organisation level – the design organisation needs an interface with the production organisation to ensure there are clear responsibilities:

- Could be a licensing agreement
- Could be a DO / PO interface document





# Design / production interfaces

How does the manufacturer know he has the latest design documents?

How does the designer ensure the product / part matches his design?

How is the continued airworthiness of the product / part ensured?

What about the control of deviations?

Who can the manufacturer ship the part to?

➤ DO/PO arrangement - 21.A.133(a) and (c)



# Alternative to BASA or W/A

- Each SoR could certify each design
- Each SoR could certify each production organisation
- Differing standards
- Lots of certificates!
- Duplication of oversight
- No trust in the SoD/SoM
- Industry not impressed
- More cost for all parties





# Use of BASAs and alternatives

- BASAs can:
  - Accept designs and systems
  - Define limited involvement in designs or systems
  - They of course are bilateral
- Working arrangements can:
  - Define each party's involvement
  - Bring about unilateral acceptance under defined conditions



# EASA's system

- EASA regulations apply (worldwide) unless superseded by a BASA, which can allow:
  - Production system acceptance, instead of POA
  - Design system acceptance, instead of DOA
  - Design certificates acceptance, instead of Part-21
- Article 8.2 acceptance of foreign design systems, supported by a working arrangement
- Article 9.2 acceptance of foreign production systems, supported by a working arrangement



# Summary

- The splitting of SoD and SoM raises complex issues
- No single solution possible, but BASAs and W/A provide an alternative to each SoR being involved
- They lower the burden on industry
- The NAAs focus changes from ‘certification’ to ‘implementation and monitoring’
- Each BASA or W/A is unique – all parties need to understand the nuances of each
- Ensure your industry follows the changes



# EASA

European Aviation Safety Agency

## Thank you for your attention

### Your safety is our mission.

An agency of the European Union

