



IRIS

Certification

INTERNATIONAL RAILWAY INDUSTRY STANDARD (IRIS) - THE NEW GLOBAL QUALITY STANDARD FOR THE RAILWAY INDUSTRY

Date & time: 22 September 2006, 10.00 - 12.00 pm
Place: InnoTrans – Messe Berlin, Hall 7, Room Europa
Organiser: UNIFE

9100 – A Standard for the Aerospace Industry

Berlin September 22, 2006

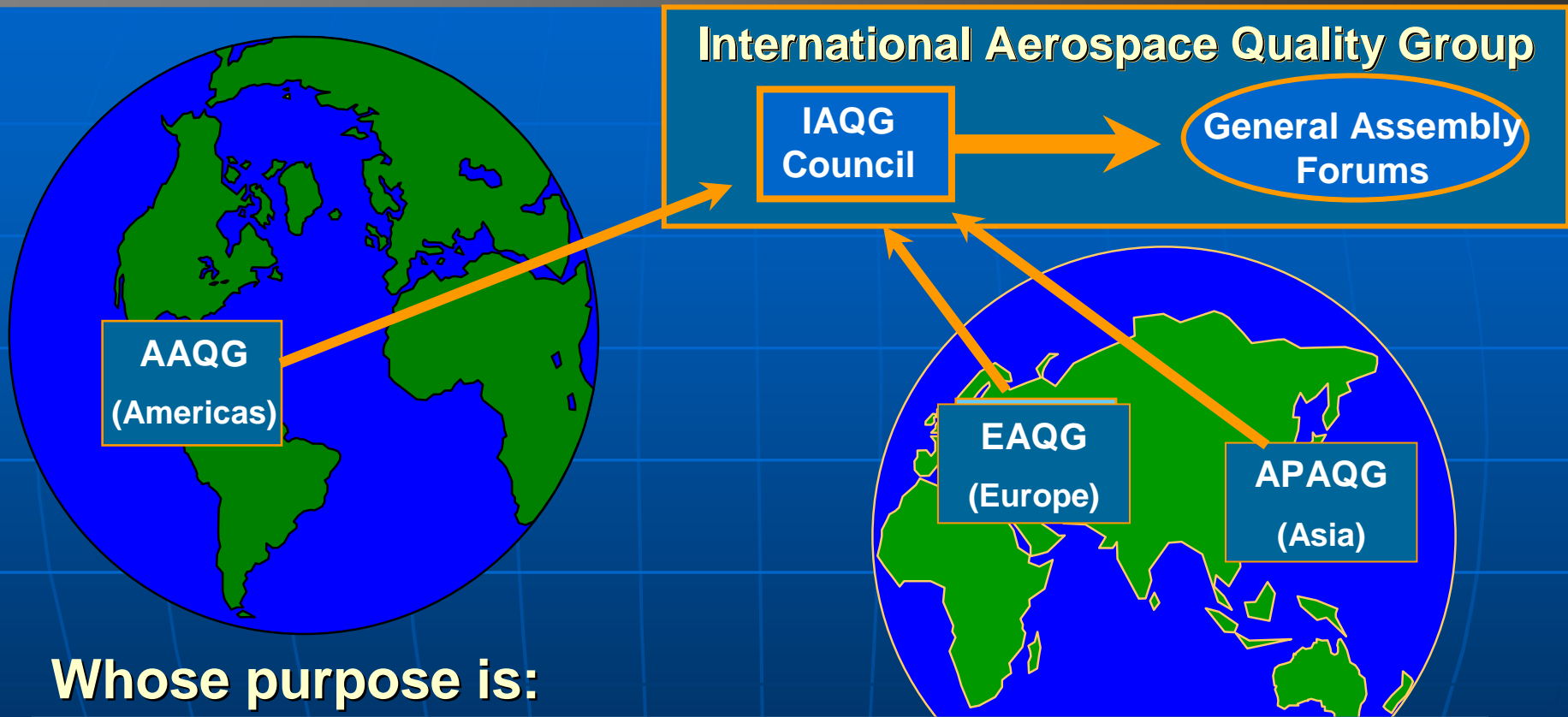
Colin Clarke
Chairman AAQG
Bombardier Aerospace

Agenda



- Introduction to the International Aerospace Quality Group (IAQG)
- History of the Aerospace Standard – 9100
- Why an Aerospace Standard?
- The 9100 Standard
- Aerospace Quality Management System (AQMS)
Certification/Registration Program requirements for the Standard
 - Accreditation Bodies (ABs)
 - Certification/Registration Bodies (CRBs)
 - Aerospace Experience Auditors
 - Oversight by Industry
 - On Line Aerospace Supplier Information System (OASIS) Database
- Current Status
- The Future
- Summary

The IAQG - A Global Team



Whose purpose is:

Implement initiatives that make significant improvements in Quality and reductions in cost throughout the value stream by establishing and maintaining dynamic cooperation, based on trust, between international aerospace companies

The IAQG – A Unique Model of Cooperation



Americas

- The Boeing Company
- Bombardier
- Eaton
- Embraer
- GE Aircraft Engines
- Goodrich Corporation
- Gulfstream
- Honeywell Aerospace
- Lockheed Martin
- Northrop Grumman
- Orbital
- Parker Aerospace
- Raytheon
- Rockwell Collins
- Rolls-Royce
- Spirit Aerosystems
- Textron
- United Technologies Corp.
- Vought
- **PRI & SAE**

Europe

- Airbus
- ALENIA
- BAE Systems
- Dassault Aviation
- EADS
- EADS – CASA
- EADS Military
- Eurocopter
- Avio
- Fokker Aerostructures
- Westlands
- Hegan
- Hispano-Suiza
- Israel Aircraft Industries
- Messier-Bugatti
- Messier-Dowty
- MTU Aero engine
- Rolls-Royce
- SAAB Aerospace
- Smiths Industries
- SNECMA Moteurs
- Sukhoi
- Thales Avionics

Europe – Continued

- Sonaca
- Turbomeca
- Volvo – Aero
- PFW
- Zodiac
- **ASD**

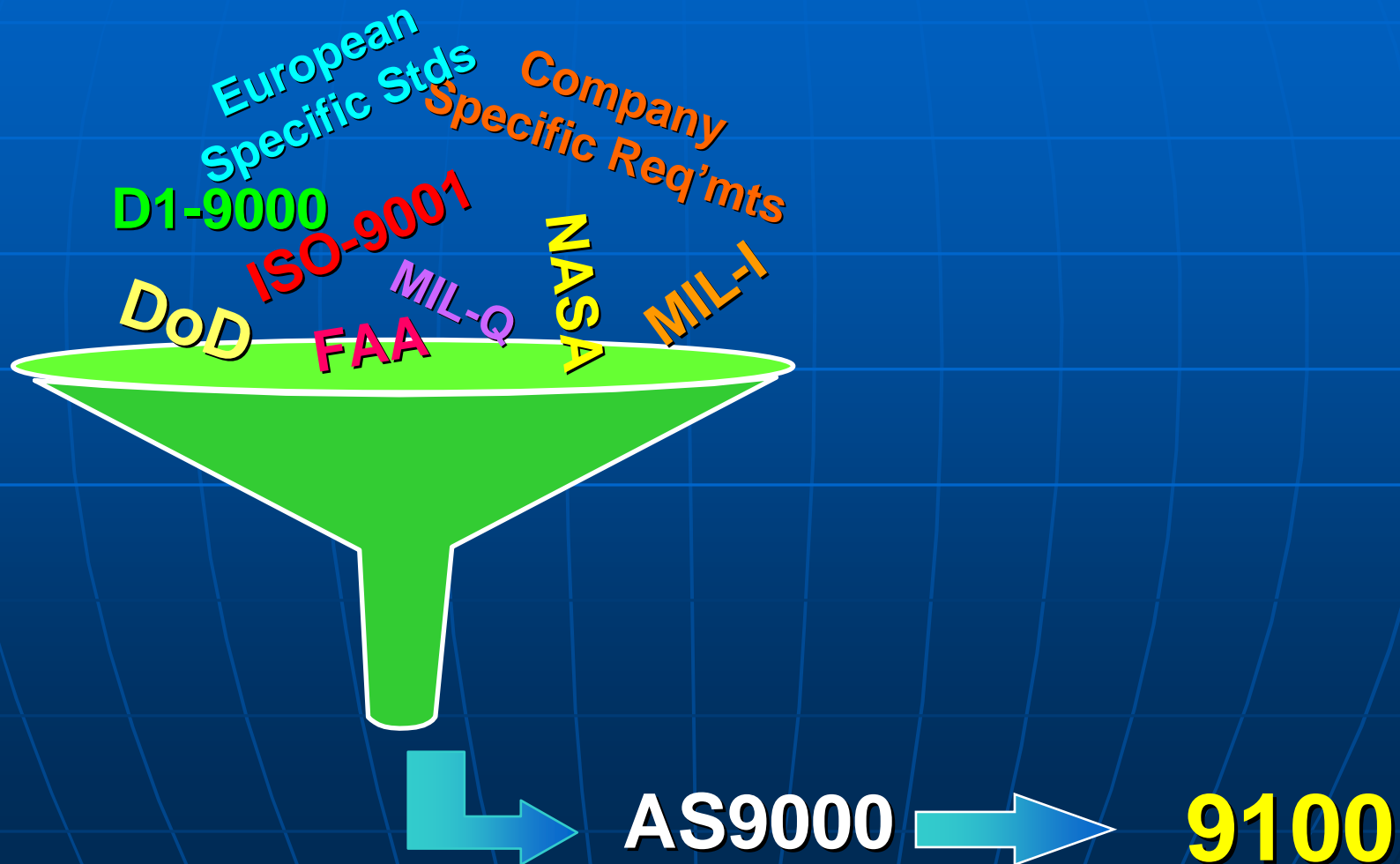
Asia

- AIDC
- Aviation Industries of China
- Fuji Heavy Industries
- Hawker de Havilland
- Indonesian Aerospace
- Ishikawajima Harima Heavy Industries
- Kawasaki Heavy Ind
- Korea Aerospace Ind
- Korean Air Aerospace
- Mitsubishi Heavy Ind
- Shin Mayawa Ind
- **SJAC**

History of the Aerospace Standard - 9100



- The need to Standardize Aerospace Quality System Requirements



Why an Aerospace Standard?



- To standardize aerospace quality expectations on a global level.
- To capture Regulatory requirements and importance of safety, reliability or maintainability.
- To capture aerospace supplements agreed to at an international level.
- To achieve improvements in quality and reduce costs throughout the value stream

The 9100 Standard



- 9100 – Aerospace Quality Management System Standard based on ISO 9001:2000
 - Defines “what” – not “how”
 - Published jointly in Europe, Americas & Asia-Pacific
 - Reduces variation across the supply chain
- Complementary standards for
 - Maintenance and Repair Stations – 9110
 - Distributors/Stockists – 9120
- Checklists for auditors 9101, 9111 and 9121.

AQMS Program requirements



Accreditation Bodies

- Must be members of the International Accreditation Forum (IAF) and signatories to the IAF Multi-Lateral Agreement.
- Must agree to periodic surveillance by the IAQG member companies.
- Must agree to “Right of Access” by IAQG member companies, IAF and Authorities.
- Conduct oversight of CRBs.

AQMS Program requirements



Certification/Registration Bodies

- Must be accredited in accordance with ISO/IEC 17021 for at least one year prior to application.
- Must agree to “Right of Access” by IAQG member companies, ABs and Authorities.
- Must agree to periodic surveillance by the ABs and IAQG member companies including the witnessing of CRB audits at suppliers.
- Be responsible for entering assessment data into the OASIS database.

AQMS Program requirements



Aerospace Experience Auditors (AEA)

- As a prerequisite to become an AEA, auditors must meet the guidelines of ISO 19011.
- There are then two paths to become an AEA:
 - i) Have 4 years of AQMS work experience within the past 10 years and complete a basic training course in the applicable standard, or
 - ii) Have at least 2 years of AQMS work experience within the last 15 years, complete a more detailed training course and complete 2 full audits that are witnessed by a previously qualified auditor in i) above.

AQMS Program requirements



Oversight of the Program by Industry

- The objective of oversight is for “industry” to assess the competence of the “non industry” team members such as ABs, CRBs etc. that participate in the program.
- The assessors meet the education and the training guidelines of ISO 19011 and have the required aerospace audit and work experience.
- Oversight is one of the methods used to demonstrate to the Authorities that AQMS certification is an Industry Controlled Other Party Process and not a Third Party Process.

AQMS Program requirements



OASIS Database

- CRBs enter the results of audits into this database.
- The information that is publicly available is the same as on the certificate:
 - Name and location of the organization audited
 - Standard certified to and certificate number
 - Name of CRB and date of registration
 - Scope of Accreditation
- The private data is:
 - Number and type of non-conformances (major and minor and chapters related to).
 - Score (total and by chapter)
 - Audit conclusions

Current Status



- Initial certification audits cover the entire AQMS standard.
- Scoring using the checklist is mandatory.
- The audit team must include at least one AEA.
- Personnel who have not worked in the aerospace industry cannot become AEAs
- Unaccredited certificates are not allowed.
- Certificates can refer to both ISO 9001 and the applicable AQMS standard and must have the marks and logos in accordance with the AB.

Current Status



- Each AB and each CRB in the program is subject to a minimum of one oversight office audit and one oversight witness audit per year.
- Suppliers are required to notify Original Equipment Manufacturers (OEMs) when they lose their registration.
- Although provisioned for, we have not yet commenced the process for shared audits by OEMs.

The Future



Strategic Drivers

- **Waste reduction by having clarity of approach, requirements and documentation.**
- **Relationship Growth Strategy**
 - Continue to build partnerships with the civil authorities, space and defense.
- **Improvement Strategy**
 - Focus on:
 - Requirements
 - People Capability
 - Supply Chain Process Capability
 - Product Realization Processes

Summary



- **AQMS certification is an Industry Controlled Other Party Process**
- **ABs , CRBs and Auditors in each sector are evaluated to a consistent process which is the basis for audits carried out in any sector being accepted by the other sectors.**
- **Suppliers receive one Quality Management System audit.**
- **The IAQG is based on trust, global cooperation and harmonization**