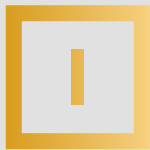**Standards-related developments and activities**

Major Overhaul

Significant revisions to AS9104-1 improve the value of AQMS certification by Tim Lee

AS9104

I n early 2000, the International Aerospace Quality Group (IAQG) developed the globally harmonized industry controlled other party (ICOP) scheme. This was meant to support the certification of AS9100/9110/9120 aviation, space and defense (ASD) organizations' aerospace quality management systems (AQMS).

The certification scheme is built on existing International Accreditation Forum (IAF) and International Organization for Standardization (ISO)/International Electrotechnical Commission (IEC) requirements for certifying an organization's quality management system (QMS). ISO/IEC certification criteria, as supplemented by unique ASD requirements, best summarizes this approach.

What is ICOP?

ICOP describes the IAQG and industry-managed certification scheme for auditing and certifying an organization's AQMS by accredited other-party certification bodies (CB), in accordance with the requirements defined in the AS9104-series standards. The objective is to support AQMS certification with active industry participants and to hold all parties in the scheme accountable for conformance.

IAQG established a trilogy of ASD standards to support deploying and overseeing the ICOP scheme (see Figure 1, p. 58). The standards are:

■ *AS9104-1—Requirements for the certification of aviation, space and defense quality management system certification programs.*

■ *AS9104-2—Requirements for the oversight of aviation, space and defense quality management system certification programs.*

■ *AS9104-3—Requirements for aviation, space and defense auditor training, development, competence and authentication.*

Figure 2 (p. 59) shows the ICOP management process.

Change

Requirements have changed over time, and the ICOP scheme requirements must change as well. A major revision to AS9104-1 is coming this year. IAQG is in the final stages of re-balloting and publishing a revised AS9104-1 certification requirements standard. These highly anticipated changes incorporate lessons learned and strengthen the alignment between the ASD industry and IAF. The ultimate objective of this revision is to improve the value of AQMS certification and increase stakeholder confidence.
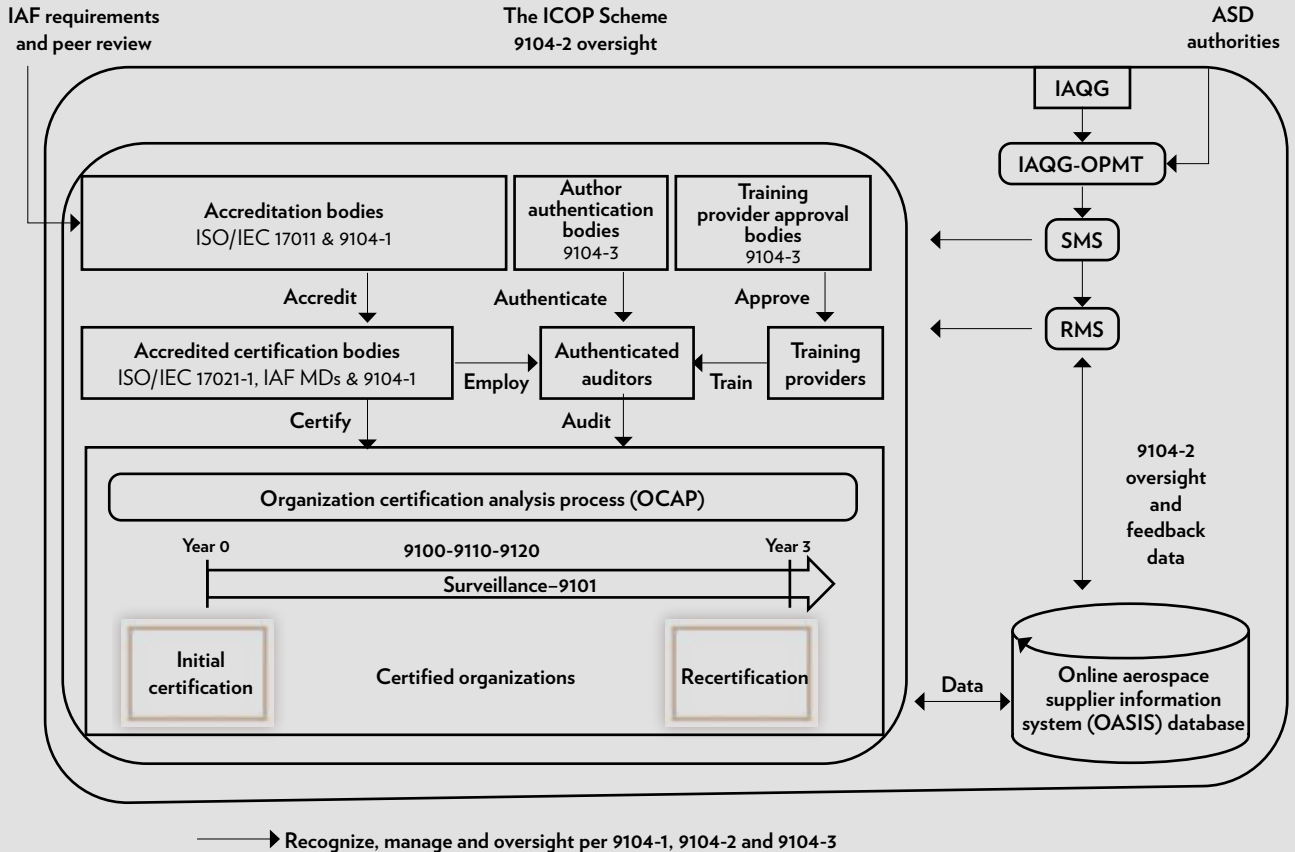
OCAP

One key change to AS9104-1—and a real game changer—is a new interactive organization certification analysis process (OCAP). The process enhances understanding of the organization's context, identifies organization risk and ensures audit time calculation is driven by verifiable data, which should lead to a value-added AQMS audit and associated report.

The ICOP scheme requires CBs to use OCAP to support management of the AQMS certification program. In conjunction with applicants

ICOP scheme

IAF requirements
and peer review

The ICOP Scheme
9104-2 oversight

ASD
authorities

IAQG

IAQG-OPMT

SMS

RMS

Accreditation bodies ISO/IEC 17011 & 9104-1	
Author **authentication** **bodies** 9104-3	**Training** **provider approval** **bodies** 9104-3

Accredit   **Authenticate**   **Approve**

Accredited certification bodies
ISO/IEC 17021-1, IAF MDs & 9104-1

Employ

Authenticated
auditors

Train

Training
providers

Certify   **Audit**

Organization certification analysis process (OCAP)

Year 0   **9100-9110-9120**   Year 3
Surveillance–9101

9104-2
oversight
and
feedback
data

Initial
certification

Certified organizations

Recertification

Data

Online aerospace
supplier information
system (OASIS) database

→ **Recognize, manage and oversight per 9104-1, 9104-2 and 9104-3**

ASD = aviation, space and defense
IAF = International Accreditation Forum
IAQG = International Aerospace Quality Group
ICOP = industry controlled other party

IEC = International Electrotechnical
Commission
ISO = International Organization
for Standardization

MD = mandatory document
OPMT = other party management team
RMS = registration management structure
SMS = sector management structure

and certified organizations, the CB performs a comprehensive analysis of the organization's QMS scope, site structure, certification audit program and risk analysis prior to each initial surveillance or recertification audit. The results and supporting information are documented and retained.

The process steps are depicted in the revised AS9104-1 standard, as shown in Figure 3.
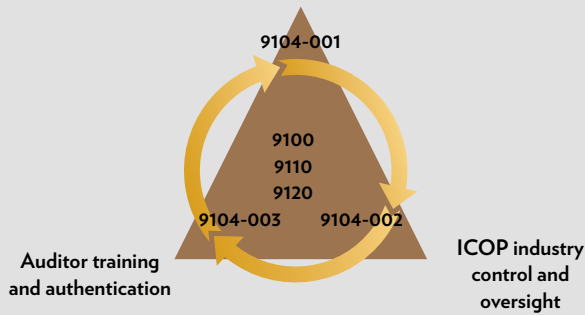
CBs in the ICOP scheme must clearly understand the context of the organization that is seeking AQMS certification. This ensures the correct AQMS standard is selected and supports creation of the certification scope.

Scope statements summarize the organization's products, services and supporting activities (such as manufacture, design, repair, distribution, servicing or testing, for example), and align with the organization's AQMS.

IAQG has simplified the certification structure requirements and eliminated the use of multiple certification structure options. Going forward, the ICOP scheme no longer will use campus or several site certification structures. The revised certification audit program is based on single or multiple site certification structures only. The determination and justification for the certification structure is documented by the CB.

FIGURE 2

ICOP management process

9104-001

9100
9110
9120

9104-003   9104-002

Auditor training
and authentication

ICOP industry
control and
oversight

ICOP = industry controlled other party

organization continually maintains a conforming and effective AQMS that meets ASD customer expectations. This process replaces the IAF process for advanced surveillance and recertification procedures (IAF MD3:2008). Certified organizations are rewarded with an appropriate reduction in audit time upon successful implementation and maintenance of this process.

Next steps

AS9104-1 was scheduled for a six-week re-ballot in March. Upon successful ballot, the target for publication is August. After AS9104-1 is published, a comprehensive supplemental rule document will be available. The supplemental rule will contain timelines for implementing these revised requirements and transitioning existing AQMS certification programs.

FIGURE 3

Organization certification analysis process steps

| Organizational context | → | Certification audit program | ↔ | AQMS risk analysis | → | Audit time |

AQMS = aerospace quality management system

The use of an AQMS risk analysis is the real game changer. The ICOP certification process uses performance-based elements for risk analysis that include on-time delivery, conformity of delivered product or service (such as item escape rate), customer satisfaction and AQMS process effectiveness.

The results of this documented analysis are used to increase audit time when risks are high, or reward high-performing, "low-risk" organizations with audit time reductions. In addition, if access to audit results data is granted, this data may be available to support a customer's external provider control processes.

Performance-based surveillance/ recertification process

The implementation and maintenance of an optional surveillance and recertification process is available in this revision. The qualification and continued use of this process is based on a certified organization's performance, including objective evidence and demonstration that the

Ultimately, the goal of the ICOP scheme is to improve AQMS performance and increase stakeholder confidence. Our scheme will use competent aerospace auditors with sufficient audit time to conduct a value-added audit and provide a comprehensive audit report to the industry that reflects the current AQMS health of a certified ASD organization. **QP**

Tim Lee works in supplier quality at the Boeing Co. in Kansas City, MO, and holds industry leadership positions in the International Aerospace Quality Group, including other-party management team oversight chair and Americas Aerospace Quality Group registration management committee voting member. He received a bachelor's of business administration degree in management. A member of ASQ, Lee is the international document representative and project lead for AS9104-1, and a team member on multiple standards initiatives.