- ISO 28001:2007, *Security management systems for the supply chain – Best practices for implementing supply chain security – Assessments and plans – Requirements and guidance*;

- ISO 28003:2007, *Security management systems for the supply chain – Requirements for bodies providing audit and certification of supply chain security management systems*; and

- ISO 28004:2007, *Security management systems for the supply chain – Guidelines for the implementation of ISO 28000.*

Great news for progress

- ISO 28000, ISO 28001, ISO 28003 and ISO 28004 are now published and available as International Standards;

- ISO 28005, *Ships and marine technology – Computer applications – Electronic port clearance (EPC)*, is now moving forward into the DIS stage. This standard is based on International Maritime Organization (IMO) requirements and the EU project on maritime navigation and information services (MarNIS). It addresses computer-to-computer transmission of mega-data using XML Format.[3]

- ISO 20858:2007, *Ships and marine technology – Maritime port facility security assessments and security*

Securing the global supply chain

by Capt. Charles H. Piersall, Chair of ISO/TC 8, Ships and marine technology

ISO initiatives for securing the supply chain encompass all modes of transport and types of cargo[1]. The ISO technical committee ISO/TC 8, *Ships and marine technology,* Chair is responsible for overall coordination of these activities with other key technical committees.[2] A tremendous success has been achieved in this area in a very short time, thanks to the dedication of those involved. Here we provide an update of our progress.

Quick and urgent response

To respond quickly to an urgent market need, four of five standards in the ISO 28000 series on security management systems for the supply chain were originally published and implemented as publicly available specifications (PAS). Their rapid publication has set a new record.

The following are approved and in use:

- ISO 28000:2007, *Specification for security management systems for the supply chain*;

1) Container, break-bulk, palletized, car carriers, Ro-ro, bulk-LNG/LPG, petroleum, Hazmat; as well as intermodal short sea shipping - rail, truck, sea-cargo carriers, passenger carriers, ferries; and inland waterways - cross borders, tug/barge, inland vessels.

2) This issue of *ISO Focus* also features articles on related initiatives on the supply chain including ISO/TC 104, *Freight containers*, ISO/TC 104/122, Joint Working Group, *Supply chain applications of RFID*, and ISO/TC 204, *Intelligent transport systems*.

3) see *ISO Focus,* July/August 2006 issue.

plan development, has recently been published. While ISO 20858 is not part of the ISO 28000 series per se, it is a security standard developed to assist industry in the uniform international implementation of the IMO International Ship and Port Facility Security (ISPS) Code. This standard will assist marine port facilities in conducting a marine port facility security assessment with elements such as the competence of personnel or the development of a security plan.

A success story with DP World

DP terminals (**see Box**) were certified by Lloyd's Register, an independent international certification body, making full use of ISO 28003. The list of certified DP World terminals is growing. DP World continues to phase in the independently audited ISO 28000 international security standard across its network of 42 terminals, spanning 24 countries and five continents, with a dedicated, experienced team of more than 30 000. DP World serves customers in some of the most dynamic economies in the world, and plans to certify 13 terminals this year. Feedback from these audits has greatly assisted ISO/TC 8 in moving ISO 28003 forward.

With ISO 28000, DP World's network of terminals will have the ability to effectively implement mechanisms to address security vulnerabilities at strategic and operational levels, as well as establish preventive action plans. All terminals will also be required to continually assess the security measurements in place to both protect its business interests and ensure compliance with international regulatory requirements. The standard will complement all international security legislative codes that DP World already conforms to at its terminals.

ISO 28000 was selected by DP World for its compatibility with other governmental and International Custom Agency security initiatives, including :

- the World Customs Organization (WCO) Supply Chain Security and Facilitation of Global Trade initiative ;

Certification and implementation highlights

- **7 September 2006** – DP World, one of the world's largest marine terminal operators, became the first company certified to ISO 28000 in both their corporate office in Dubai, United Arab Emirates, and DP World, Djibouti;

- **4 March 2007** – First marine terminal in the Americas achieves certification to ISO 28000 – DP World Vancouver, Canada;

- **9 April 2007** – Latin America gateway terminal completes certification to ISO 28000 – DP World Caucedo, in the Dominican Republic.

- the EU Customs Security Program – Authorized Economic Operator (AEO) ;

- the US Customs and Border Protection initiative – Customs Trade Partnership against Terrorism (C-TPAT).

DP World Caucedo already participates in the US Container Security Initiative (CSI) concerned with US Customs officers located at the terminal-to-check-cargo destined for the USA.

> **"Such efforts will enhance the security of society as a whole, reducing the risks of threats to cargo or people."**

Major companies, ports and terminals in other countries are moving forward in their implementation and certification to ISO 28000. Among them are six ports in the USA and several others in Asia, South America and Europe. Additionally, an airport is also participating.

ISO 28001 supports the EU's Authorized Economic Operator (AEO) concept, another initiative that contrib-

utes to securing and facilitating the ever-growing flow of goods in the global supply chain. The standard was also developed to assist the WCO's Framework of Standards, and their positive feedback indicates their satisfaction. The US Department of Homeland Security has also pointed out the importance of working with ISO.

The security standards development programme is a major success story of ISO, offering a timely support to industry, international governmental organizations (e.g. IMO, WCO) and non-governmental organizations (NGOs, such as the International Association of Ports and Harbors).

An integrated approach

Our ISO programme is a risk based holistic approach to transport security. The developments of the last decade demonstrate past efforts to improve transport security and safety. For example, steps to address the risks of attacks against merchant ships, smuggling of illicit drugs, and stowaway boarding were pursued individually by different committees within different organizations. Unfortunately, these crimes continue to exist today.

It is perhaps important to note at this point that, while the maritime link is only one element of the supply chain, 75 % of the earth's surface is water, 90 % of world trade moves by sea and 46 000 commercial ships ply the sea. Global maritime commerce constitutes over 200 billion USD and over 220 million containers per year. To help secure the maritime domain, over 30 countries have navies with a global reach, and 160 countries have some form of navy, coast guard or maritime police capability.

Broad representation

The number of links in the supply chain network continuously increases throughout this process. ISO provides tools that help maintain security throughout the chain. These tools are first delivered in the form of PAS, which once tested in the marketplace can then evolve into full ISO stand-

ards[4]). These PAS have been drafted to cover entities throughout the supply chain, involving a broad range of industry representatives. This broad representation has served to ensure that the resulting standards can be applied to a wide range of companies in many different capacities and at numerous stages in the international supply chain.

The shipping industry is a minority as one of the few links in the chain currently subject to have certifiable security measures in place. This includes compliance with the IMO ISPS. Several government agencies, in particular customs administrations, seek to apply similar measures to companies operating throughout other segments of the supply chain. In this context, ISO standards can help to facilitate some of the goals set out in the WCO's Framework of Standards to Secure and Facilitate Global Trade, such as the mutual

recognition of national security-related programmes and the Authorized Economic Operator (AEO).

ISO can take the lessons learned from the implementation of the ISPS Code and programmes like Customs-Trade Partnership Against Terrorism (C-TPAT) and apply a similar approach to other links in the supply chain, such as road and rail transport, and the various places of manufacture, warehousing and consolidation. Ultimately, such efforts

will enhance the security of society as a whole, thereby reducing the risks of threats to cargo or people. We are on course and speed, delivering on time to meet market needs. ∎

4) Not all technical committees adopt this procedure, but this strategy helps ISO/TC 8 respond to its specific market needs in a timely manner and link to regulatory bodies.

About the author

Capt. Charles H. Piersall, a retired United States Navy captain, has over 50 years of experience in the maritime industry, and is recognized worldwide as a leader in the field of international maritime standards. As Chair of ISO/TC 8, *Ships and marine technology*, he developed the strategic vision for "linking" the maritime industry and the International Maritime Organization (IMO). Capitain Piersall is a recipient of numerous awards based on his contributions to standardization. He leads the largest international group of companies and organizations in identifying, preparing and adopting International Standards for intermodal supply chain security. He represents the ISO Secretary-General as official liaison to the International Association of Ports and Harbors (IAPH), head of ISO delegations to IMO, head of ISO delegations to the World Customs Organization (WCO), and liaison to the International Labour Organization (ILO) on maritime matters.