

A future where products and services are built to be interoperable

Interoperability is the torch in the darkness

by Marshall Slater, CFO, Network Centric Operations Industry Consortium, Washington

Several general officers with experience in military crises realized that the new age of information dominance wasn't working for their forces. These generals, from both Europe and the US, were watching twentieth century forces struggle to enter the twenty-first century. One of these officers, LtGeneral Carl O'Berry, retired from the US Air Force and convinced his new civilian employer to help an industry consortium tackle some of the challenges facing the military. As is typical of a general, he considered the benefits for the greater good rather than the bottom line profit margin. Thus, the vision for a new consortium was set and the Network Centric Operations Industry Consortium (NCOIC) was created.

As luck would have it, during a trip to NATO headquarters in Brussels, LtGen O'Berry met with another visionary, chairman of the NATO Military Committee, the German General Harald Kujat. That initial fifteen-minute courtesy call extended into a two-hour meeting, sending staff into a frenzy to reschedule multiple high level meetings. The two generals had a similar vision that would move military and non-military organizations into the new century with a torch that would assemble armies. Not just armies of soldiers, but also communities of interest (COI) such as armies of military and non-military organizations, countries, and NGOs; and all with the ability to instantly band together to create the greatest multinational assistance effort since World War II. I had the opportunity to work for them.

Marshall "Tip" Slater



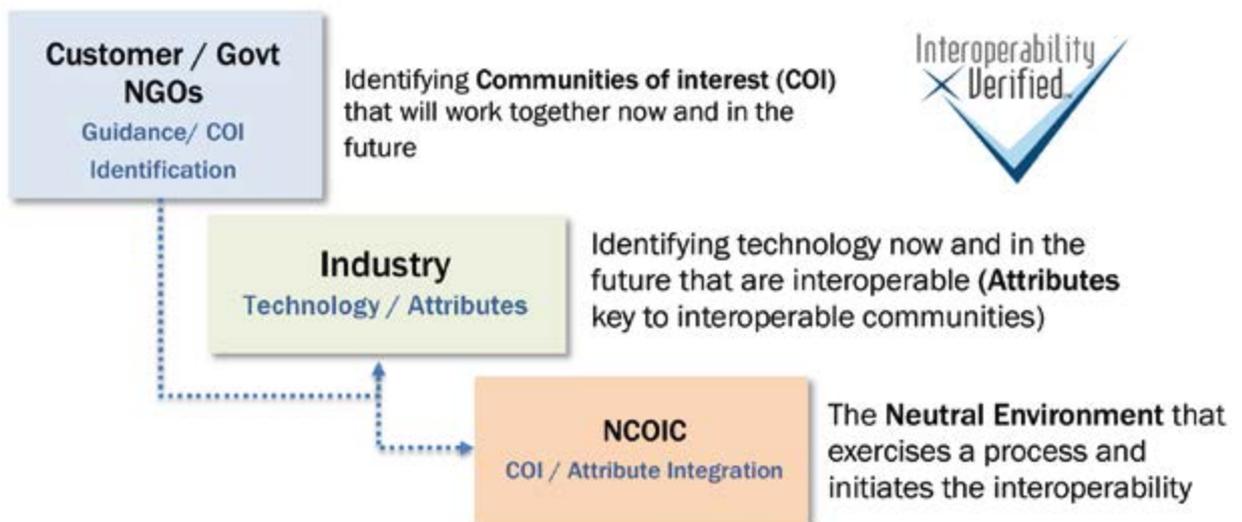
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is Chief Financial Officer of the Network Centric Operations Industry Consortium (NCOIC). He received a Master of Aeronautical Science degree from Embry-Riddle Aeronautical University in Florida and a Bachelor of Science degree in business administration from the University of Massachusetts Lowell. Mr Slater had a distinguished career in the US Air Force, retiring as a Colonel. Before joining NCOIC, he worked for a decade with the Boeing Company, where he was director of Virtual Operations. His other positions included deputy director of Strategic Architecture for Boeing Integrated Defense Systems and director of Business Development for Boeing Government Information and Communications Systems.

From vision to action

Have you ever worked for a visionary? It can be simultaneously a terrific and terrible job. Terrific because it's new and always exciting, terrible because it's new and always exciting. There's the constant push of new ideas that the visionary loves, as well as the tracking, cataloguing and costing of those ideas, which the visionary hates. The latter was and often still is my job. It's time for governments to know that interoperability across domains is possible, and above all achievable. This is the description of the ideas and the cataloguing that have taken place for fourteen years – fourteen years of study regarding the vision and tools of interoperability.

Government Need – Industry Tools and NCOIC Processes



Graphik: ESDU, Source: NCOIC



Meeting of NCOIC and NATO ACT leaders to discuss interoperability verification, December 2016, Arlington/Virginia

Photo: © NCOIC

ity that actually make it work crossing COIs. Interoperability crossing countries and market COIs, allowing vast groups of players to rapidly assemble, solve large complex problems and ultimately be disassembled when no longer needed is a real problem. Common examples are first responders, medical communities, military operations and banking. Each has its own COI and operates within these unique communities very neatly. Yet there are times when the communities need to overlap and produce unique results for a much greater need. There must be, for the rapid integration of capabilities, the ability to change while operating and to implement a swift disassembly. This need increases as the twenty-first century moves forward and the interrelationships of communities increase in both desire and complexity.

A revolution in interoperability

Fourteen years later, the NCOIC's new ideas have become the tools and cataloguing has become the process. The range of tools that were developed began with the simple yet necessary cataloging of an interoperability document of terms and definitions. Once it was determined that industry and government could talk to one another, concepts such as minimum level of interoperability were established. Subsequently, the uniquely odd relationship between technology, business value, culture and governance was identified and quantified. In order to actually build an interoperable system, a re-focused technical model became the Management Model. The model was tested and used in a real world organizational development within NATO. The latest project that capped the NCOIC processes identifies a future where products and services are built to be interoperable using a simple but unique cross-domain Interoperability Verification (IV) initiative. After fourteen years of work by technical and demonstration teams and contracts with government organizations, the NCOIC sits upon the most comprehensive collection of inter-

operable tools and processes ever created. This cross-domain interoperability, now very doable, still requires a modicum of thought and effort to establish so that it enables the creation of a rapid assembly process. This can be done in the highly unique environment that formed these tools and processes. This unique tool that resides within the NCOIC's uniquely neutral and legal environment allows industry, academia and governments to come together and use these tools to solve large complex issues.

Making the complex simple

All the ideas mentioned fall into three boxes (*see diagram on the left*):

- The organizations and government identify their needs and communities.
- The industry provides the tools, technology and the market vision.
- The NCOIC enables the processes, brings the communities together to assemble, change and disassemble.

Thus the processes developed by the NCOIC over fourteen years find common ground for each community, enabling capabilities to be used in governance documents that highlight rules of interoperable needs, capabilities for acquisition, and processes for organizations to rapidly integrate and subsequently dissolve.

All these years of dedication to solve the interoperability challenge have resulted, as each of the NCOIC advisors has pointed out, in making the complex simple. Reviewing all the work the NCOIC has accomplished in this area and reading all the verbiage feels exhausting, but simplicity truly is the key. Years ago came a vision, today the tools to make it work, and tomorrow the ability to make the world a better place.

→ Web NCOIC Website: <https://www.ncoic.org>