



POSITION STATEMENT

INTEROPERABILITY FOR THE NATIONAL HEALTH INFORMATION NETWORK

*Adopted by the IEEE-USA
Board of Directors, 20 Nov. 2009*

IEEE-USA believes that “interoperability”^[1] is one of the most critical concepts confronting the adoption and implementation of enhanced electronic information technologies into our national healthcare infrastructure. Creating an efficient effective National Health Information Network (NHIN) is dependent upon proper implementation of this concept. The word “interoperability” has become ubiquitous in usage, but remains vague in its definition.

In healthcare, the ability “to use the information that has been exchanged” means not only that healthcare systems must be able to communicate with one another, but also that they must employ shared terminology and definitions. This latter emphasis places a much greater burden upon system designers and electronic engineers to make the information truly usable in the distributed clinical setting of our healthcare environment. NHIN should be identified as a key asset of the nation's healthcare critical infrastructure, and should be taken into account while developing requirements.

To facilitate adopting and implementing electronic information technologies into the national healthcare infrastructure, IEEE-USA makes the following recommendations:

1. NHIN interoperability should be based on open standards, rather than proprietary requirements. This distinction is made so that copyrights and trademarks will not become issues for shared use of protocols in developing NHIN core network capabilities and operating parameters. (See background for details on these standards.)
2. Approval of NHIN standards and interoperability certification should be the responsibility of public/private collaboration, with regulatory oversight provided by federal agencies, as appropriate, for each standard.
3. The Centers for Disease Control and Prevention (CDC), the Center for Medicare and Medicaid Services (CMS), the Department of Homeland Security (DHS), the Federal Emergency Management Agency (FEMA), the Environmental Protection Agency (EPA), the Department of Defense (DOD), the Veterans Administration (VA), the Food and Drug

Administration (FDA), the Department of Energy (DOE), and the Department of Agriculture (USDA) must work to make their internal IT systems interoperable, and also to create full interoperability among their respective agencies and among health care facilities, state and local health departments, and emergency first-responders, so they can effectively manage both natural and manmade disasters.

4. Development of the NHIN should not compromise the security and privacy of personally identifiable health information, as currently defined in the HIPAA Privacy and Security Final Rules.
5. Action should be taken to ensure full interoperability among communications systems used by emergency first responders and health care agencies, in the event of natural disaster or bioterrorism attack.
6. Reliability requirements for identified NHIN functions should be developed.
7. In health care, Semantic Interoperability, or shared terminology, is as important as System Interoperability, or shared functions, and must occur to achieve maximum benefit for the use of information that has been exchanged.

This statement was developed by IEEE-USA's Medical Technology Policy Committee and represents the considered judgment of a group of U.S. IEEE members with expertise in the subject field. IEEE-USA advances the public good and promotes the careers and public policy interests of more than 210,000 engineers, scientists and allied professionals who are U.S. members of IEEE. The positions taken by IEEE-USA do not necessarily reflect the views of IEEE or its other organizational units.

BACKGROUND

Specifically, IEEE-USA supports the following:

1. Expanding SNOMED-CT vocabularies to ensure full semantic interoperability for the NHIN is continuing. In particular, a cross mapping to ICD10 should be completed. Such maps should be made publicly available through the United Medical Language System (UMLS) at the National Library of Medicine, and should become a standard component of any EHR system.
2. IEEE-USA endorses the harmonization process developed by the Health Information Technology Standards Panel (HITSP).
3. Development and harmonization of requirements for the NHIN require the active participation of the U.S. Department of Health and Human Services Office of the National Coordinator for Health Information Technology (ONCHIT), and the federal advisory committees chartered to provide recommendations on policy, requirements and certification criteria. IEEE-USA supports the work of the Health Information Technology Policy Committee (HITPC) and the Health Information Technology Standards Committee (HITSC) in providing recommendations to ONCHIT.

4. Assessment of interoperability is an important component of the certification process for health information technology. IEEE-USA recommends the inclusion of interoperability assessment in the meaningful use criteria being developed by HITPC.
5. The NHIN shall provide the necessary guarantees of privacy and security for protected health information as described in the IEEE-USA Position Statement, "National Health Information Network, with Emphasis on Security and Privacy Issues"
(<http://www.ieeeusa.org/policy/positions/NHIN.asp>)

Footnote

^[1] According to the *IEEE Standards Computer Dictionary*, interoperability is the "ability of two or more systems or components to exchange information and to use the information that has been exchanged."