Dr. Lynn Johnson earned a doctorate in Instructional Design and Technology from the University of Iowa with a cognate in computer science. She has spent 20 years developing and researching innovative educational technologies with an emphasis on human-computer interface and the evaluation of the merit and worth of computer-based products and methodologies. Dr. Johnson has been the principal investigator on two NIH grants and an investigator on 7 grants funded by NIH or the National Science Foundation. Currently, she directs the dental informatics and information technology activities for the University of Michigan School of Dentistry including learning technologies, the patient management system, and the information and communications infrastructure.

Mr. Speyart van Woerden graduated from Columbia University and received an MBA from the Ehsal University in Brussels. He served his compulsory military duty in the Intelligence Service of the Royal Netherlands Army and speaks seven languages, including his native Dutch. During his career as an international banker he worked in the Netherlands and Belgium. In 1993 he designed the first commercially available pan-European Public Key (PKI) system, which allowed Unilever to manage its European banking relationships. He founded Awanim in 1996. Awanim’s customers include Philips Electronics, ING Bank International, Swedbank, RZB Bank, PT Telekom Indonesia and the United Nations.
Abstract:
The University of Michigan’s School of Dentistry (U-M) participates in regional, national and international research collaborations involving human subjects. Much of this research involves the exchange of EPHI, which must be protected.

An electronic communications solution was required that would ensure HIPAA compliant communications around the globe, yet be easy to use for non-technical users.

S-WIRE™ is a PKI system for the secure and assured exchange of electronic data. Communications in S-WIRE™ are encrypted, digitally signed, securely archived, and there is certainty of the communications cycle. S-WIRE™ was designed to accommodate the very strict standards for digital signatures in the European banking world and under the European Union’s Privacy Directive for digital signatures.

In 2007, U-M conducted three evaluation studies that examined the efficacy of S-WIRE™ as a practical solution for health care research and general healthcare community. Surveys, interviews and cost analyses evaluated the ease-of-use (technical and end-user) and cost of implementing and using S-WIRE™ in two different multi-center national research settings and in one international research collaboration. Key findings will provide health care researchers and providers with the information required to determine if S-WIRE™ can meet their EPHI exchange needs at a reasonable cost.

Description and Outline of the Proposed Presentation:
The presentation will consist of 3 parts:

1. **Background Research:** Succinct summary of the research describing user acceptance and compliance with HIPAA and other security requirements. The impact of EPHI security requirements on research designs will also be summarized. (Johnson-15 minutes)

2. **S-WIRE Demonstration:** The PKI security technology behind S-WIRE™ will be described so that it is understandable by healthcare researchers. In addition, the presentation will include a functional overview of S-WIRE™, which is a PKI based stand-alone network for secure and provable communications using the Internet. (Speyart van Woerden-45 minutes)

3. **Evaluation Results:** The evaluation results will be presented including the end-user surveys and interviews, and the results of the technical and end-user cost analysis. (Johnson-15 minutes)

4. **Q&A:** All-15 minutes

Specific Educational Goals:
This presentation has three goals:

1. To summarize the current EPHI security issues including the balance between security and end-user compliance and ease-of-use.

2. Demonstrate S-WIRE™, a PKI security communications product that has been used successfully in the international banking industry with a focus on its use in healthcare research and beyond to the healthcare community.

3. Summarize the results of an evaluation of the ease-of-use and cost analysis of using S-WIRE™ in national and international healthcare research.

Who Should Attend:
Health care researchers, as well as other parties, who regularly exchange electronic personal health information (EPHI).