The Future of Cyber Situational Awareness

Abstract
CyberHUD is proof-of-concept for augmented reality technology in security. It is an AR mobile application and cloud infrastructure designed to interact with data from public networks and devices. The goal of CyberHUD is to improve network information usage and knowledge by offering a visual platform for data in the local vicinity. The application overlays existing information over the mobile device’s video to show typically invisible data in a real world context. With a modular design and further extensions in mind, the project poses to be a unique tool for quick network data inferences and visualizing networks in security, operations, and maintenance scenarios.

Architecture

Impact
- Can increase an organization’s network security through identifying misplaced devices, removing malicious devices, etc.
- Can familiarize new users to network topologies and devices quicker and easier, reducing operations costs
- Can streamline network maintenance for large companies
- Can stand as a glimpse of future in AR cybersecurity and network visualization products

Project Performance
- 100% of initially promised components and features delivered
- Scalable product hosted with cloud technology on AWS
- Extendable architecture allows easy integration of new data sources through API gateway
- Potential to be ported to more immersive platforms, such as the Microsoft HoloLens