

**Title: Past, Present and Future of Internet Technology**

**Audience:** Up to 150 people supporting DISA and Air Force units on Gunter and local Montgomery Information Technology people

**Sponsored by:** Montgomery AFCEA Chapter

**When:** April 26, 2011

**Presentation Abstract:**

**Morning Session: (April 26, 2011; 0900-1100; Gunter Annex Auditorium, Building 892)**

Hear a first-hand account of how the Air Force Intranet began and evolved into what it is now serving all Air Force missions and users today. See how an Advanced Research Projects Agency (ARPA) project paved the way for today's network. Learn about the major events that shaped the use of the Internet in supporting the Air Force mission (e.g., initial use of X.25 packet; TCP/IP; concentration of data circuits to save money; consolidation of Air Force Data Processing Centers (DMRD 924 & 918); modernization of base networks; and use of the Internet protocols in deployed and mobile environments. Learn about fundamental models, architectural considerations, constraints, and problem-solving processes that have remained relevant over the past 20 years based on an industry expert's first-hand account of the evolution of the DoD wired and wireless Intranets used in environments to include tactical environments. Learn about the relationship and importance of the continued evolution of networking technologies and their importance to many challenges that will be faced by DoD (e.g., infrastructure modernization, unified communications, mobile computing, expanded virtualization, IPv6, security, VoIP, remote access, cloud computing, web-based applications, Internet TV, Video Telepresence, and social networking). Learn about the emergent properties of networking and some unintended consequences of key decisions. Most importantly, gain insight into how to better prepare yourself and your organization for future changes and opportunities from the perspective of a recognized industry expert who created the initial Air Force enterprise-wide intranet.

**Afternoon Session (April 26, 2011; 1300-1500; Gunter Annex Auditorium, Building 892)**

The afternoon session is intended for personnel who have in-depth knowledge of internet networking. It will briefly summarize the morning session in summary level and then address specific current topics in more detail. For example, Mr Beach will discuss Radio Aware Routing, IP Router for Tactical Radio Networking, and a variety of tactical radio technologies and capabilities that present unique challenges for building tactical data networks using IP routers. Also, learn about evolving industry standards that provide a framework for establishing QoS, multicast, and service delivery in tactical networks. The challenges and opportunities for tactical networking have applicability in other areas. Mr Beach will solicit specific topics of interest from the audience and will address those topics in detail in an interactive forum. The objective is to allow participants to gain insights from Mr Beach and their peers into how to better prepare themselves and their organization for future changes and opportunities from the perspective of a recognized industry expert.

**Speaker Biography:** Mr. Darrel Beach is an Electrical Engineer who has been a Systems Engineer/Architect with Cisco Systems for over 15 years. He has worked within the DoD on a wide variety of network technology deployments, including Enterprise, Wireless, ATM, Optical, Base Area and Wide Area networks, including Tactical Networks. Prior to joining Cisco Systems, he served 5 years Active Duty in the Air Force at Gunter AFB where he was involved in designing and deploying the original Defense Data Network and the initial phases of the DISN/AFIN. After active duty service, he worked for 5 years as an Air Force civilian employee continuing work on the DISN and the Air Force deployment of the Air Force Intranet (AFIN). He joined Cisco in 1996 and has over 25 years of experience in designing and deploying IP based networks and service delivery technologies.