

**IAMCOM 2007 – A Summary (<http://www.iamcom.org>)**  
**Information Assurance Middleware for COMmunications**  
**(IAMCOM)**

held in conjunction with

**2nd IEEE/ACM International Conference on COMmunication System  
softWARE and MiddlewaRE (IEEE COMSWARE 2007)**



**January 12, 2007, Bangalore, India.**



The Air Force Office of Scientific Research (AFOSR) underwrote a newly-formed information assurance workshop organized and led by the Air Force Research Laboratory (AFRL) Information Directorate. The workshop, entitled "Information Assurance Middleware for COMmunications (IAMCOM), was endorsed by the Institute of Electrical and Electronics Engineers (IEEE) and held in Bangalore, India on January 12, 2007. Bangalore was also the site for the COMmunication System softWARE and MiddlewaRE (COMSWARE) event – the IEEE’s premier international conference dedicated to addressing emerging topics and challenges in communications software. Middleware is software in distributed computing systems that acts as a mediator between an application and the network where it serves to hide the complexity and idiosyncrasy of network communications from the application. Techniques for tolerating faults that arise from naturally-occurring phenomena to faults that are attacker-induced, increases the size of the complexity space that should be hidden from the application. Middleware, running beneath the applications, can serve as a “shock absorber” against the faults that an application encounters (hence the IAMCOM logo).

Bangalore is regarded as the epicenter of outsourcing, call centers, and companies that write software for the American and European markets. According to Thomas Friedman, author of the national bestseller, *The World is Flat*, worlds collide in Bangalore: glassy modern buildings are surrounded by pock-marked roads where cows roam freely and horse-drawn carts are still used. Friedman resolves this contrast by asserting that India is virtually natural-resource deprived; yet the brainpower of its populace is being effectively mined. Against this backdrop, AFOSR’s Asian Office of Aerospace Research and Development (AOARD) launched an "India Initiative" to reach out to this country while its research community is still forming. AOARD Technical Director, Lieutenant Colonel Bill Nace, who gave the workshop's opening remarks, stated that "... starting early in growing a community is good for the Air Force because the investment will have broader impact."

As co-organizer and co-chair of IAMCOM, Dr. Kevin Kwiat of the Information Grid Division, provided a meaningful context for assured communication challenges that are of interest to the Air Force and brought these problems to the forefront with IAMCOM. IAMCOM's acceptance rate was a respectable 44% with exactly 50% of the published papers coming from Indian authors. Papers were presented in three sequential sessions: Resource Management for Quality of Service (QoS), Data Security, and Reliable Operations. Dr. K. K. Ramakrishnan, of AT&T Labs Research, gave an invited talk entitled “A Cross-layer view of Protection and Restoration issues in IP Backbones”. Dr. Kwiat, along with two Indian experts - one from the Indian Institute of Science and the other from the Indian Institute of Technology - participated in the workshop's technical panel

on the confluence of fault tolerance, real-time processing, and QoS. A poster session composed of graduate student presenters filled-out the IAMCOM program.

Coincidentally, the workshop was followed by the arrival of a high-level Air Force delegation. The delegation, that includes AFRL Deputy Director Les McFawn, visited the Indian Institute of Sciences in Bangalore lending further evidence of the Air Force's interest in India's technological endeavors.

Sometimes, assistance comes in unexpected forms, and in this regard the IAMCOM organizers wish to thank Mr. Bill Baker of the City of Rome Department of Traffic Maintenance for keeping us "on track".