Communications Pioneer Headlines Spring Grad Ceremonies

By Barbara Honegger

There was something special about Spring 2010 Graduation ceremonies at the Naval Postgraduate School, where 248 students were named to diploma status, and 243 international students earned a total of 253 advanced degrees, June 18.

The air was electric as a capacity audience of family members, colleagues and friends cheered the about-to-be graduates on to stage. The King Auditory was to a roaring march by the De Mont Brass followed by an operatic rendition of the National Anthem by Mary Whitaker, daughter of NPS Operations Research Associate Professor Lynn Whitaker.

President Dan Oliver kicked off the ceremony by introduc- ing the keynote speaker, Dr. Irwin Mark Jacobs, Chair of the National Academy of Engineering and co-founder of the Fortune 500 company Qualcomm, whose pio- neering Code Division Multiple Access (CDMA) mobile wireless technology is used by an estimated 800 million customers worldwide.

"On June 6, we celebrated the 100th year of the Naval Postgraduate School with two newly-renamed stu- dent halls, recently named for the late Dr. Jack Wozencraft — new FNS Department of Research and Distinguished Pro- fessor of Electrical and Computer Engineering; founding Chairman of the NPS Command, Control and Com- munications Academic Group; and recipient of the In- stitute of Electrical and Electronic Engineers Alexander Graham Bell Medal. Jack’s co-author on the acclaimed Principles of Communications Engineering, still in use worldwide, and the namesake of the University of California, San Diego Jacobs School of Engineering, Dr. Irwin, Jacobs is our guest speaker today,” Jacobs reviewed the highlights of his career, which began with a high school teacher telling him there was no future in science and engineering, to changing his major from hotel administration to engineering and moving to MIT for his doctorate, where he continued on as a Profes- sor – Dr. Peter Denning, Chair of the Computer Science Department and Cebrowski Institute Executive Director, was actually one of Jacobs’ students.

"I was invited to stay on at [MIT] as a faculty member, which is when I had an office next to Jack Wozencraft,” Jacobs recalled. “It was because of the book that I got a lot of requests for consulting, which led me to start a company called LINPACK, where we worked for 10 years with military programs and NASA to develop terminals in airplanes and ships and Army ground vehicles that could talk to satellites and carry sensitive messages. To stand out from the other companies that were pursuing the problem in a traditional way, we built our system around a [central] processor and [Very Small Aperture Earth, VSAT] terminals.”

"The change came when in general the charge in space communications for Fleet SATCOM [Lt. Gen. Forrest Mc- Cartney] decided to take a risk and fund it for production, and in so doing, Jacobs added. “The point is, that was a brave decision... to take a chance on a relatively unknown company with a new idea, and it leads to my two main messages today. As you take advantage of this wonderful education you’ve been given, become more receptive to new ideas. Be innovative, be open to new possibilities and new approaches. If you are the future, you are very exciting. And – as Jack Wozencraft was very proud of his students — understand the theory, but find its real-world applications. Take the theory and put it to use. Put it into practice.”

"The Naval Postgraduate School offers the unique opportu- nity to earn a first-rate graduate degree while applying what you’ve learned to real-world military issues, what both Dr. Wozencraft and Dr. Jacobs said are so important,” noted Lt. Jamie Vandike, winner of the Monterey Council Navy League Award for Highest Academic Achievement. "NPS has earned my highest recommendation. The ability of the faculty to provide top-notch graduate education, while simultaneously applying to engineering and moving to re- cent military issues has equipped me with the analytical decision-making tools to be successful in the fleet.”

Students’ Smart Phone App Maps “Human Terrain”

By Barbara Honegger

Thanks to a faculty-student team at the Naval Postgraduate School, smart phones will play an even greater role in field operations. From a collection of requests for a variety of missions, from humanitarian assistance and disaster response (HA/DR) to counterterrorism, the prototype of a new smart phone application, called Field Information Support Tool (FIST) Light, was developed by two NPS students – signals intelligence officer Marine Corps Capt. Carrick Long- ley and Army CW3 Chad Machiel – un- der the guidance of Information Sciences Research Associate James Ehliber and the Co-Directors of the Common Operation- al Research Environment (CORE) Lab in the Defense Analysis Department, Prof. Nancy Roberts and Assistant Professor Sean Everett.

Longley conceptualized and designed the knowledge management system for his master’s thesis in Informa- tion Warfare Systems Engineering, and Machiel developed its ethnographic socio-cultural module.

“FIST fundamentally changes the way we collect, process, analyze, aggregate, display and disseminate a data in a variety of environments by leveraging the power of smart phones for field-based data col- lection and fused situational awareness,” Ehliber said. “It’s an easy-to-use, inex- pensive hand-held solution to achieving our own operational need. If we’d had FIST then, we could have gotten them to a much larger collector team, and had a much wider and deeper sensor network.”

From May 14–21, Longley, Ehliber and Information Sciences Lecturer Ed Fish- er operationally validated FIST Light as part of the 2010 Cooperation Alliances Readiness and Training (CARAT) Thai- land joint training exercise between the U.S. Navy and Marine Corps, and Royal Thai Navy. “The demonstration of FIST Light as an integrated HA/DR and re- lease platform in CARAT Thailand 2010 was a definite success,” said Ehliber. ““This was stated by Rear Admiral Nova Tyson, Commander of Combined Task Force 73 and Logistics Group Western Pacific, which is exploring making the Na- val Postgraduate School a clearinghouse for technology requests from host nations for the CARAT 2011 series of exercises.’’”

IN BRIEF

• The Undersea Warfare (USW) Academic Committee has been rewritten to the level of an Academic Group. Chaired by Oceanogra- phy Prof. John Colosi, with support from Rear Adm. Jerry Ellis, Chair, USW and Director of the USW Research Center, and Rear Adm. Rick Williams, Chair, Mine and Expediency Warfare, the group will develop and maintain NPS as a Navy USW center of excellence and will actively explore educational and research partnerships. Its charter is at https://intranet. nps.edu/Code1/Default.htm.

• The 10th Annual MOVES Institute Research and Education Summit will be held at NPS from July 13-15; Simon Bradley, Vice Presi- dent, Technical Capability Centre 5 – Simu- lation, IT & Systems, and Dr. Rick Satava, Professor, Department of Surgery, University of Washington, are the keynote speakers. Pre- registration is required. For a complete agenda, go to www.movesinstitute.org. For more in- formation or to register, contact Holly Farlo, hfarlo@nps.edu.

• The Staff Development Council is sponsoring Handling Conflict With Tact and Fineness in Ingersoll 122 on July 13 from 8:30 a.m. to 3:30 p.m., and two pre-retirement planning workshops on July 27 (CSRS) and 28 (FERS) from 8:00 a.m. to 4:00 p.m. in the MIL audi- tory. Contact Laura Cole to register: lcole@ nps.edu or Ext. 2414.

• The Committee on the Future, charged by President with examining the spectrum of higher education and providing recommenda- tions on how NPS can fully develop its po- tential as a national resource, will be conduct- ing its first meeting in mid-August.
As I begin my 26th year of service to higher education, I am proud to be associated with NPS, an institution with a long and rich history. As the first and incoming Vice President for Finance and Administration, I intend to contribute to that history for the benefit of the institution, the Navy, and the greater NPS community. I look forward to working with the Chief of Naval Operations, the Rear Admiral John Jay Schieffelin and the Chief of Naval Operations (Navy), the Rear Admiral Jerry Ellis, in the key areas of economic management and strategic thinking for NPS Dragon.