Advancing Wireless Careers Worldwide Through the IEEE WCET Program

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The proliferation of wireless communications rapidly shapes and re-shapes every phase of twenty-first century life and business. Worldwide industries representing finance, healthcare, transportation, public safety, security, government, and utilities are already expanding operations with advanced technologies that instantaneously relay text, data, and visuals to widespread locations, while controlling any number of remote devices.

As a result, the opportunities for certified wireless professionals that can clearly demonstrate their skills in the global domain are virtually limitless. As the next wave of mobile applications and services accelerate the industry's frenetic growth throughout the industrialized world and brings us closer to the planet's most remote regions, demand for highly skilled wireless professionals will naturally increase. This includes users increasingly expecting more complex applications and faster results accessible from any location in almost every country. For instance:

- Tablets will become the primary computing device for most users within the next four years; and tablet sales will approach nearly 400 million units by 2016 according to Forrester Research.

- Cisco predicts that over the next five years mobile device subscriptions will reach 7.1 billion.
- Morgan Stanley estimates that mobile device use could easily top 10 billion units by 2020.
- Mobile traffic nearly tripled in 2010 and is expected to increase another 26-fold by 2015 in projections released by Cisco.
- Last year's mobile data traffic was 8x the size of the entire global Internet in 2000.
- More people now have mobile subscriptions than access to electricity and safe drinking water as cited in a report by Business Insider.

The IEEE Communications Society (ComSoc), which recently observed its 60th year dedicated to the advance of communications worldwide, developed the IEEE Wireless Communication Engineering Technologies (IEEE WCET) Certification Program to address the international wireless industry's substantial need for qualified individuals with real-world problem-solving skills. Launched under the guidance of Professional Examination Service (PES), a renowned professional credential developer, as well as international industry experts and experienced wireless practitioners, IEEE WCET has since become recognized as a vendor-neutral and transnational credential for demonstrating the wireless expertise of communications professionals working around the world.

Through a globally based group of dedicated volunteers, the exam and its supported products and services are continuously improved and updated for currency and relevance. This includes the latest advances and developments in the areas of RF engineering, propagation, and antennas; access technologies; network and service architectures; network management and security; facilities infrastructure; agreements, standards, policies, and regulations; and fundamental knowledge. Subsequently, hundreds of professionals worldwide are currently benefiting from the IEEE WCET credential and its world-recognized ability to:

- Certify the practitioner's knowledge of key wireless applications, technologies and standards.
- Help individuals working in other engineering areas to switch to the wireless field as new, exciting and higher paying opportunities arise.
- Identify qualified engineers for challenging positions as well as transfer from other communications fields.
- Screen job applicants on the basis of demonstrated ability, while assessing employees for increased responsibilities and promotions.
- Reduce the costs, time and resources associated with the development and implementation of employer in-house wireless training programs.

To qualify for the IEEE WCET designation, candidates with a bachelor's or comparable degree from an accredited institution and at least three years of professional wireless engineering experience must pass the program's detailed comprehensive examination held twice annually in the spring & fall. Administered on computer at selected worldwide locations, the official IEEE WCET exam is composed of 150 multiple choice questions with each applicant given up to four

hours to complete the exam. The US$500 fee ($450 for IEEE and IEEE ComSoc members) covers the application fee, processing, the “seat fee” for taking the test, scoring and score reporting, and a certificate sent to those who pass the exam.

IEEE ComSoc has worked diligently with IEEE WCET committee members to create a series of resources to aid exam preparation. This includes the launch of an informational web site located at www.ieee-wcet.org that contains regularly updated details such as testing dates and locations, application information, exam specifications, training organization links, a glossary and sample questions. A 75 question online practice exam for $50 gives prospective IEEE WCET exam takers the opportunity to gauge how prepared they are for the official IEEE WCET exam.

Other resources include the second edition of A Guide to the Wireless Engineering Body of Knowledge (published by John Wiley & Sons), the ultimate reference on wireless technology; free subscriptions to the bi-monthly IEEE Wireless Communications Professional electronic newsletter; and a free Candidate’s Handbook covering policies, subject area details, reference sources and sample questions. Furthermore, IEEE ComSoc now offers an ongoing series of online and in-person learning formats designed to not only help candidates prepare for upcoming exams, but also increase their overall knowledge of the wireless field. Upcoming sessions include:

- VoLTE: Convergence of IMS-based Voice and LTE.
- Virtual 5 Day Wireless Communications Engineering: Intermediate Fundamentals Review & Current Practices.
- Self Organizing Networks.
- Introduction to Professional Wireless Communications.
- LTE for the Wireless Engineering Practitioner: Fundamentals & Applications.
- Practical Wireless Communications Engineering.
- Overview of M2M for Engineers and Managers.

Founded in 1952, IEEE ComSoc, which has over 50,000 members and stands as the second largest of IEEE’s 38 technical societies, is dedicated to utilizing the best talent, education and training to secure open career paths for members and non-members worldwide. Anyone interested in taking the IEEE WCET exam or participating in an IEEE Training course should know that they are working with a world-accredited organization, which has been recognized as the premier intellectual resource of the communications industry for the past six decades.

About the Author

Rulei Ting has been deeply involved with the development of the IEEE WCET program since its inception. Over the past 20 years, he has also held numerous senior-level positions within the Networking, Data Networking, Wireless Networking

and Network Operations areas off AT&T, Bell Labs, and telecom equipment startup companies.

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