Chapter 0
Personal Communication Systems

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Text Book

Here's your all-IP network handbook for 3G and beyond

Experts forecast a future in which all telephone services will be delivered over the economical, efficient IP network. In this follow-up to *Wireless and Mobile Network Architecture*, the bestselling guide to wireless network engineering, Yi-Bing Lin and Ai-Chun Pang delve into third and beyond generation networks to give you a solid foundation for the 3G/B3G environment. They provide an in-depth examination of how the all-IP core network can be developed and how applications are created, with review questions at the end of every chapter to help you hone your skills.

You'll be able to:

- Understand mobile core network protocols and applications based on the 3G/B3G all-IP core network architecture
- Handle SGSN/GGSN session management functions for IP connection
- Use signaling protocols in non-allP networks to offer VoIP services
- Engineer real-time SRNC (Serving Radio Network Controller) switching without packet duplication
- Support user mobility, call setup, and call release using SIP (Session Initiation Protocol)
- Set up cache schemes with fault tolerance to speed up the incoming call setup process with the I-CSCF (Interrogating Call Session Control Function) cache
- Write device drivers, information access methods, and application logic independently using iMobile, a mobile service creation platform

YI-BING LIN is Chair Professor of the College of Computer Science, and VP of Research and Development, National Chiao Tung University, Taiwan. His research interest includes mobile communications and computing. He is an ACM Fellow, IEEE Fellow, AAAS Fellow, and IEE Fellow.

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Wireless and Mobile All-IP Networks

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Content

Score

- Homeworks and one oral presentation
  - 40%

- Midterm and Final examinations
  - 30% and 30%