Learn the fundamentals of CDMA technology

Course Overview
This course provides technicians with a fundamental understanding of CDMA technology and provides a hands-on classroom environment to learn about the block diagram of a mobile and how to measure and find faults. This experience enhances the productivity of technicians in the production environment who do testing, rework, and support. By taking knowledge of the CDMA system together with measurement theory, the student will have the tools and knowledge necessary to be faster and more effective in working with mobile phones.

What you will learn
- CDMA network, cells, and sectors
- Soft, softer and hard hand-offs
- Pilot and synch channels
- Traffic channels
- Vocoder and error correction
- Walsh and long code
- Camp and call set-up
- 8924C CDMA test set operation
- Transmitter measurement
- Receiver measurement

Specifications

Course Type
Application/Product Training

Audience
All personnel involved in CDMA development, planning, operation, implementation and maintenance.

Prerequisites
Students will have to have completed the RF Measurement Basics (H7216B opc.101) course or equivalent.

Course Length
1 day

Course Format
This course is divided into instructor-led lessons and hands-on labs. These reinforce the theory and its application to mobile fault finding.

Delivery Method
Scheduled at Agilent locations, or Dedicated at a customer site.

To save you time and travel, many Agilent courses can be delivered at your site. Agilent can provide required equipment, or you can save money by furnishing your own.

Detailed Course Agenda

AMPS Basics
Digital Basics
What is the reason behind the move to digital systems?
Understanding these issues enables us to introduce the fundamental shifts from directly modulated analog signals to digitally encoded data transmission.

CDMA Basics
This lesson looks at three areas of CDMA: Network, Air Interface, and Signal Path.

The CDMA Network:
- Network components
- Cells and sectors
- PN offset
- Hand-off techniques
- Power changes

The Air Interface explores:
- CDMA implementation
- Walsh and long codes
- Frames and data formatting
- Paging and call formatting
The signal Path from the microphone to the antenna is explained:

- Vocoder
- Channel coder
- Interleaving
- Modulation
- Transmission

**CDMA Measurements**

Making real measurements and applying all the theory learned in the previous lessons will enable students to quickly find faults in the mobile. This will reduce the amount of time spent looking for problems and improve productivity. This is achieved by teaching the student about:

- Detailed mobile block diagrams
- Functional testing
- How to make measurements
- What is being measured
- What measurements tell us
- How to isolate problems

For the latest information on class schedules and locations visit our website:

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(fax) (305) 269 7599
Taiwan:
(tel) 080 004 7866
(fax) (886 2) 2545 6723
Other Asia Pacific Countries:
(tel) (65) 375 8100
(fax) (65) 836 0252
(e-mail) tm_asia@agilent.com

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