Welcome to Mobile Connected World!!

@singi, @jack2
Who are we? – enjoying people! 😊
Points of Today Talk

0x00. LTE Network
0x01. LTE Femtocell
0x02. Femtocell vendors
0x03. Femtocell Security Threat

0xFF. Escape to Real world, but OTR ONLY
0x00. LTE Network

Understanding 1G vs 2G vs 3G vs 4G

1G

2G

3G

4G

THE NEED FOR SPEED in kilobits per second

2.4 kbps

64 kbps

2,000 kbps

100,000 kbps
LTE?

• LTE (Long Term Evolution)
  • 3G → 4G
  • LTE != 4G
    • Not fully satisfy the 4G requirements
    • 3.9G
  • Case of South Korea
    • 2013.09
    • KT / SKT / LG U+
  • ALL-IP
    • Signal → IP
    • Seamless
LTE Network
What is femtocell?

• A Tiny home Cellular base station.

• Gap Filler
  • (Out of Service area)

• Cell area
  • 10m

• In LTE Standard, define to Home eNB. (HNB)

• Recently, called to “small cell”, which one better?
What is femtocell?
Why need to femtocell?

• Classic base station,
  • 1 base station, N User Equipment.
    • Cooper’s Law

• Out of Service area Problem.
How many femto vendors?

- Overseas?
  
  - Samsung
  - AT&T
  - zBoost
  - CISCO
How many femto vendors?

• In **South** korea, not all,

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Femtocell Security Threat Issue

• Sniffing Network (SeGW)
  • IPSec encryption.
  • but if you o(p)wned FAP, it doesn’t problem. 😊

• Reflash custom firmware.
  • Check to firmware update logic.
  • Many time, it is worked.

• SS7/SIGTRAN attacks
Femtocell Security Threat Issue

• No roaming call charges

• Spying On connected End User Device

• Attack on the Core Network
아 근데 진심, 발표 해도 되나?

진심은 언제나 궁서체와 한글
김재기
형님 계속 걱정이 되는데요 ㅎㅎㅎ
행태 발표에도 관참을까요?ㅎㅎㅎ
소송(?)같은거 들어올까봐요ㅋㅋ
그래서 교수님한테 간단하게 나마 취약점 리포트를 드렸는데요 ㅎㅎㅎ

이기택
안와. 걱정마