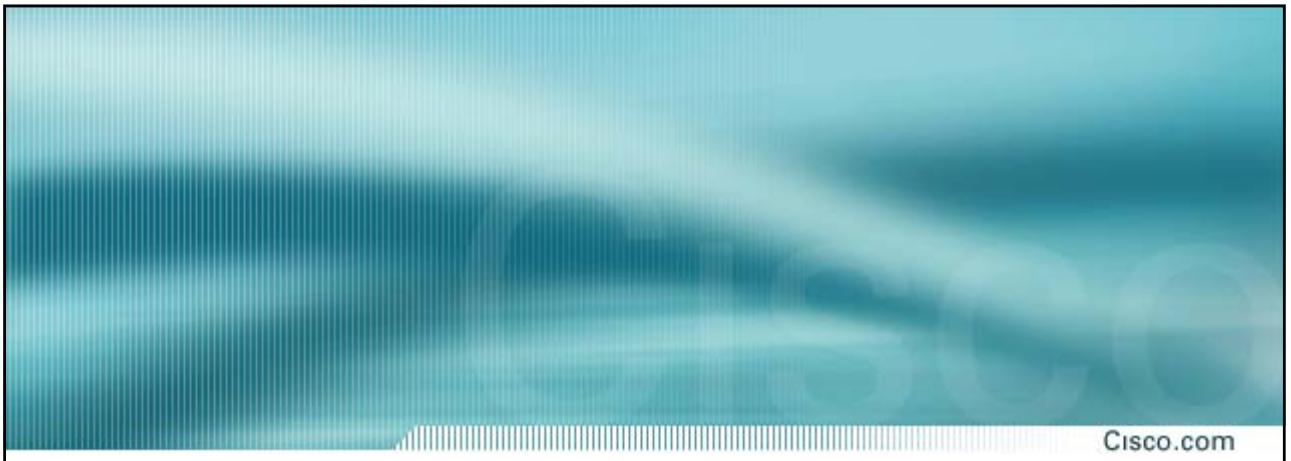

Network in Motion

최명주

Systems Engineer

Cisco Systems

judychoi@cisco.com

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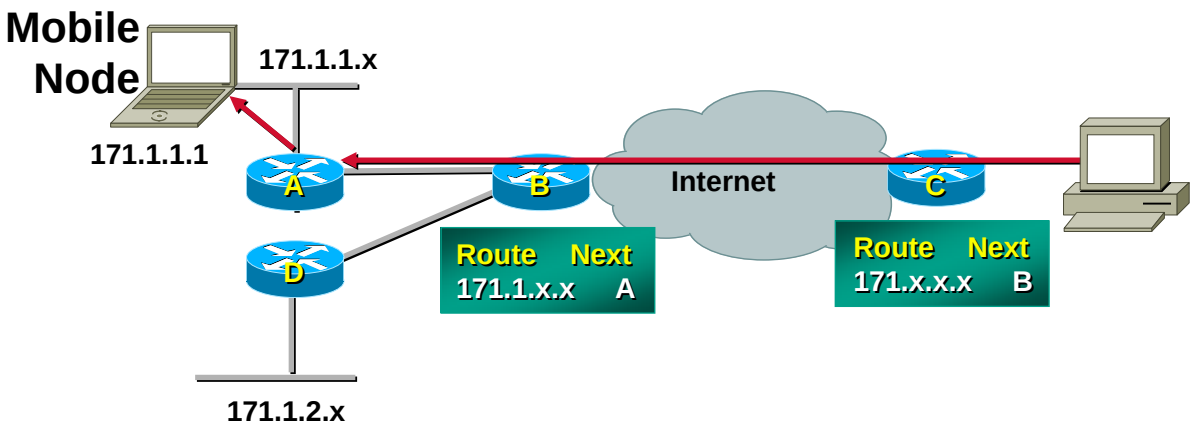
인터넷 상의 Mobility 구현 문제



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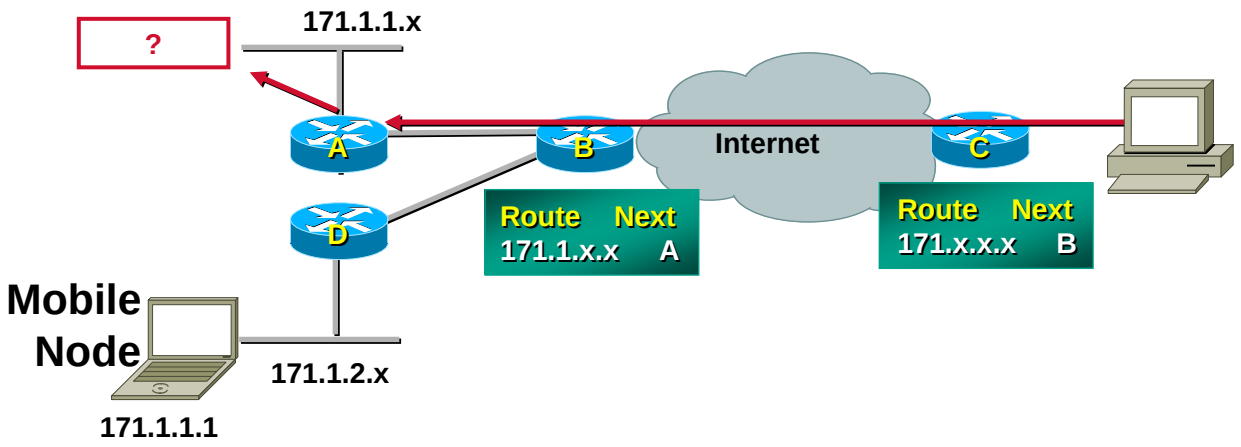
인터넷 상의 Mobility 구현 문제



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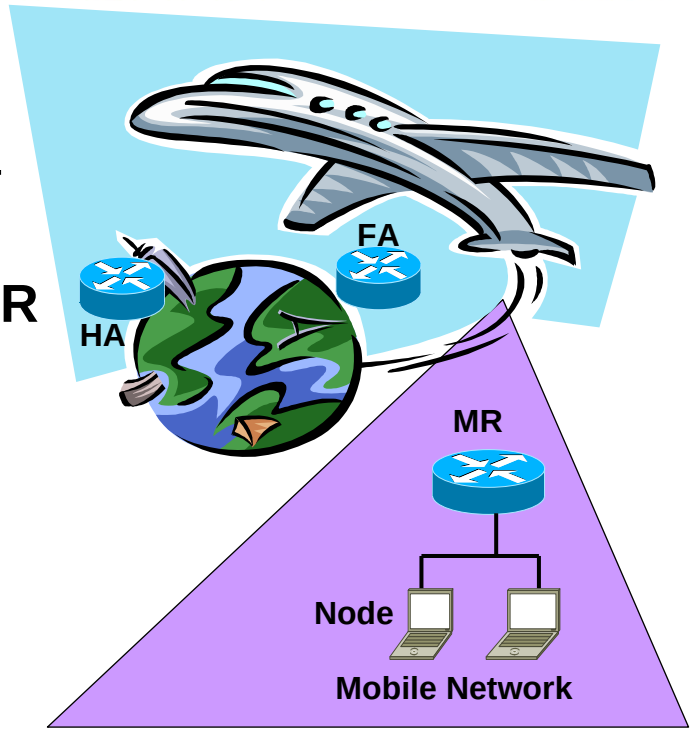
Mobile Networks란 무엇인가?

Mobile network란 네트워크의 이동을 구현하기 위하여 **MR (mobile router)**를 사용하여 구성된 네트워크



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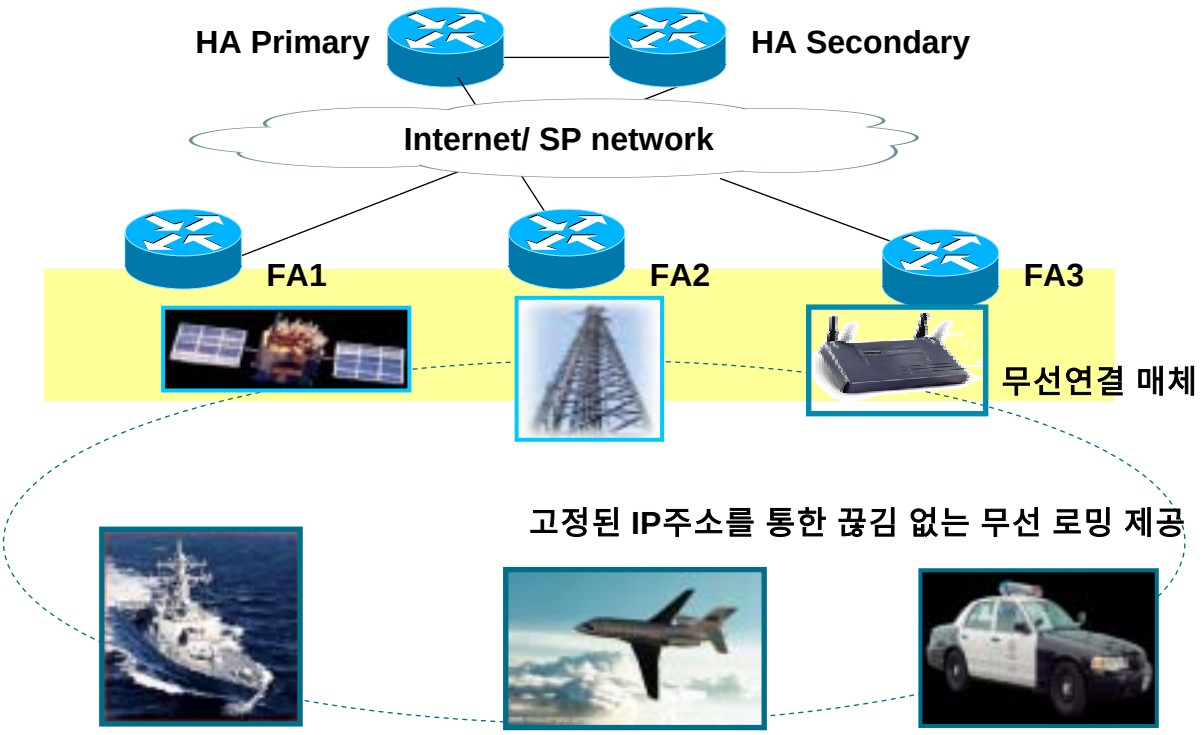
Mobile IP 구성방식



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Networks in Motion

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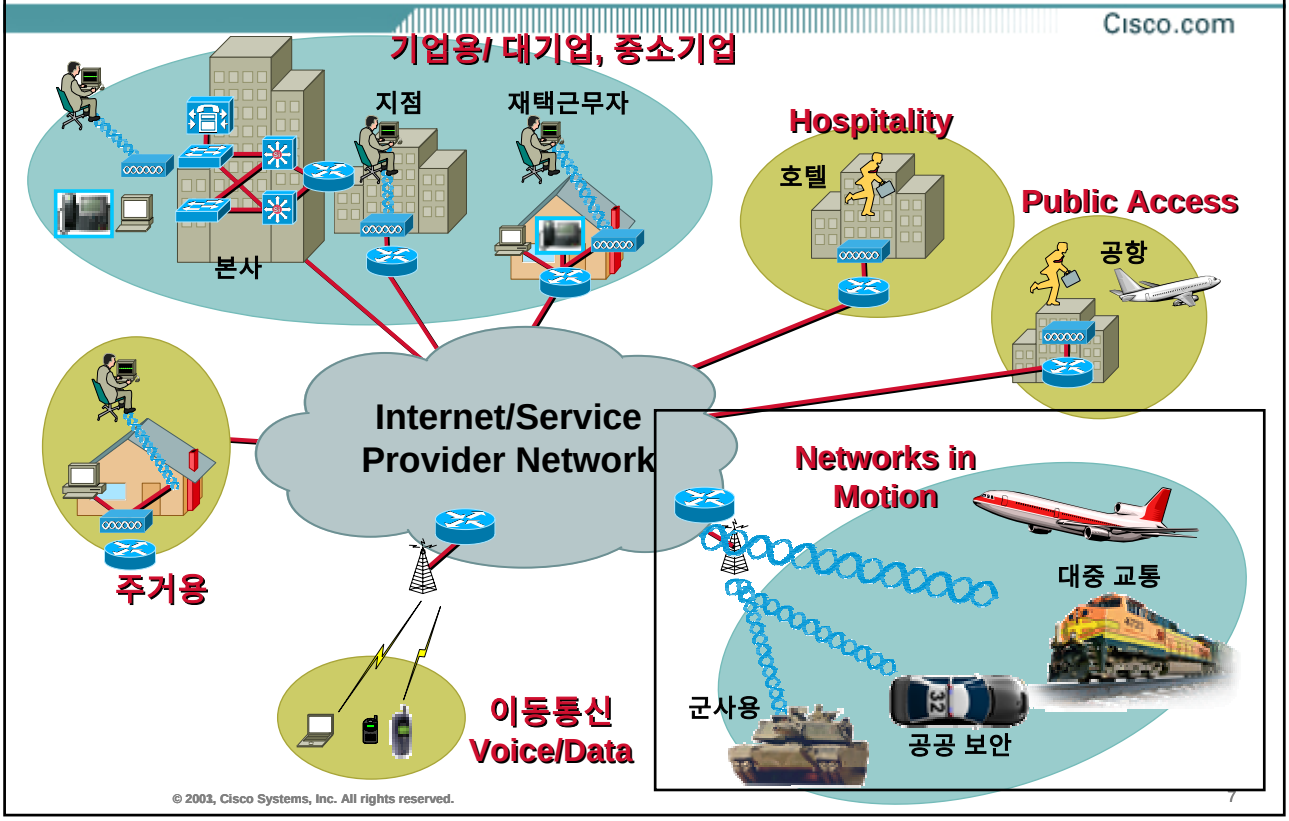
네트워크 모빌리티



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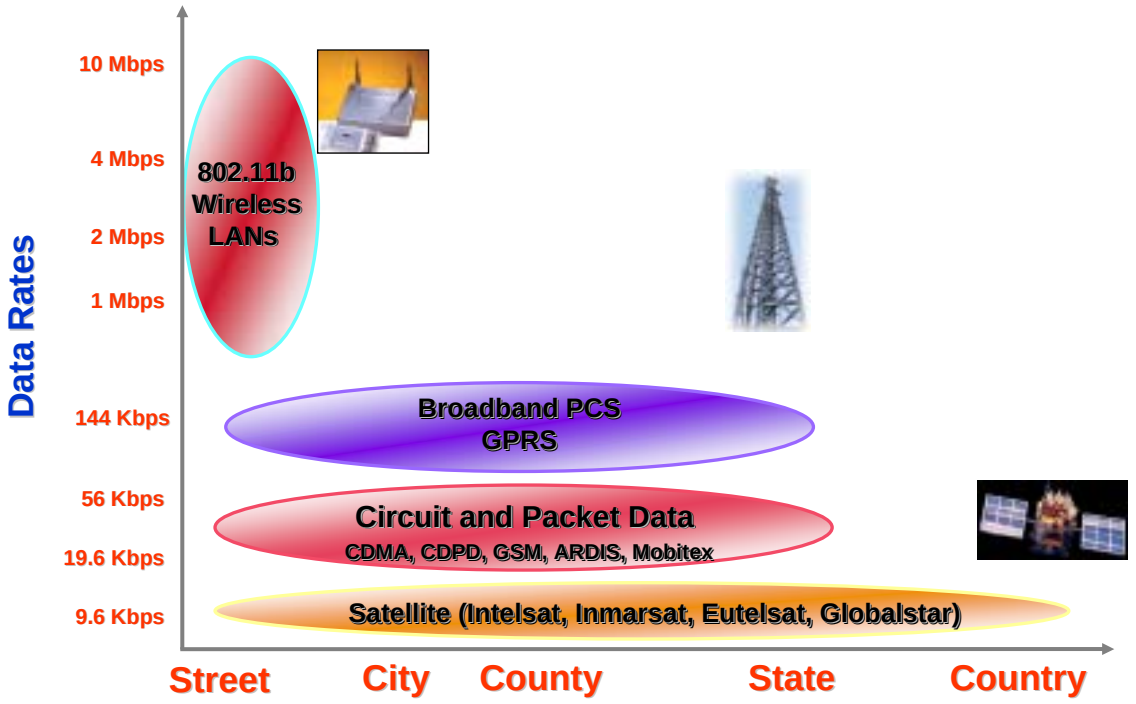
무선기술의 적용 범위와 성능 비교

Cisco.com



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Mobile Networking 솔루션 시장 분류

Cisco.com

Cisco 3200 Mobile Access Router

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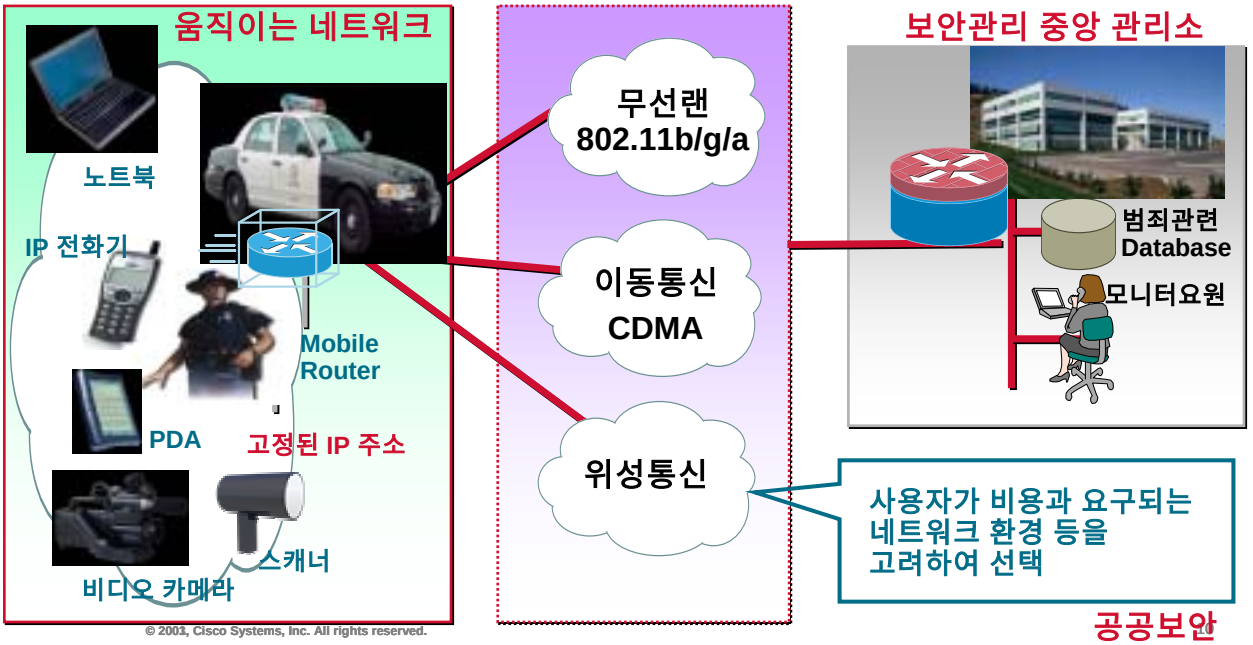
공공 보안의 구현 예

Cisco.com

시스코 IOS Mobile Networks Software를 통해
끊김 없고 안정적인 네트워크 연결을 제공한다



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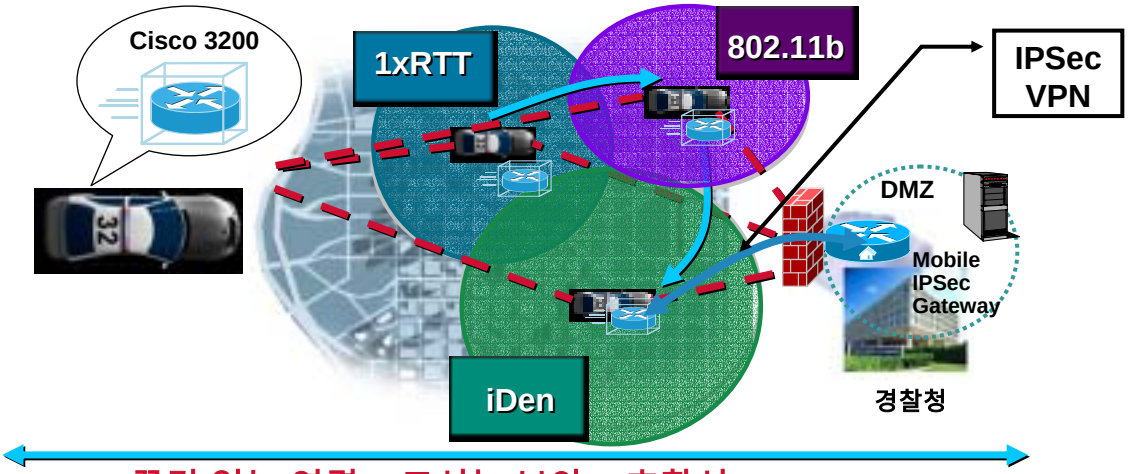
Cisco IOS Mobile Networking을 통한 지속적인 이동성 보장

Cisco.com

성공적인 테스트 완료

- 무선랜(802.11b)과 1xRTT & iDen (이동통신) Networks 구간 망의 끊김 없는 로밍
- 1xRTT up to 60kb/s & iDen up to 20kb/s
- 3200에서 VPN Gateway으로의 IPSec VPN tunnel



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공공보안

대중 교통 적용 사례 : Lufthansa

독일 항공(Lufthansa)은 비행기 내
시스코 모바일 네트워크 솔루션 적용으로
탑승객에게 인터넷 서비스 제공

- 비행기 외부 : 위성통신
- 비행기 내부 : Cisco AP1200 무선랜 서비스

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군사용 적용의 예

Foreign Agent

Carrier Battle Group

Home Agent Primary

CCOA

Mobile Router

Home Network
Secondary

Foreign Agent

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Cisco 3200 Mobile Access Router

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Cisco 3200 Mobile Access Router

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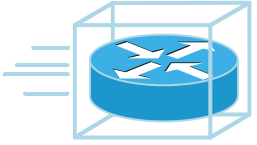
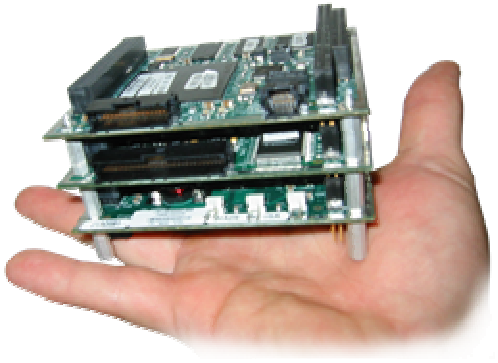
- 이동체 환경에 적합하게 개발된 새로운 시스코 라우터 플랫폼
- 컴팩트한 사이즈와 낮은 전력 소모
- 튼튼한 디자인
- 기존 시스코 3640 라우터에 버금가는 성능
- 시스코 Mobile IP, Mobile Network가 가능한 IOS 구동
- 위치이동이나 무선환경에 관계없이 Seamless한 이동성 보장





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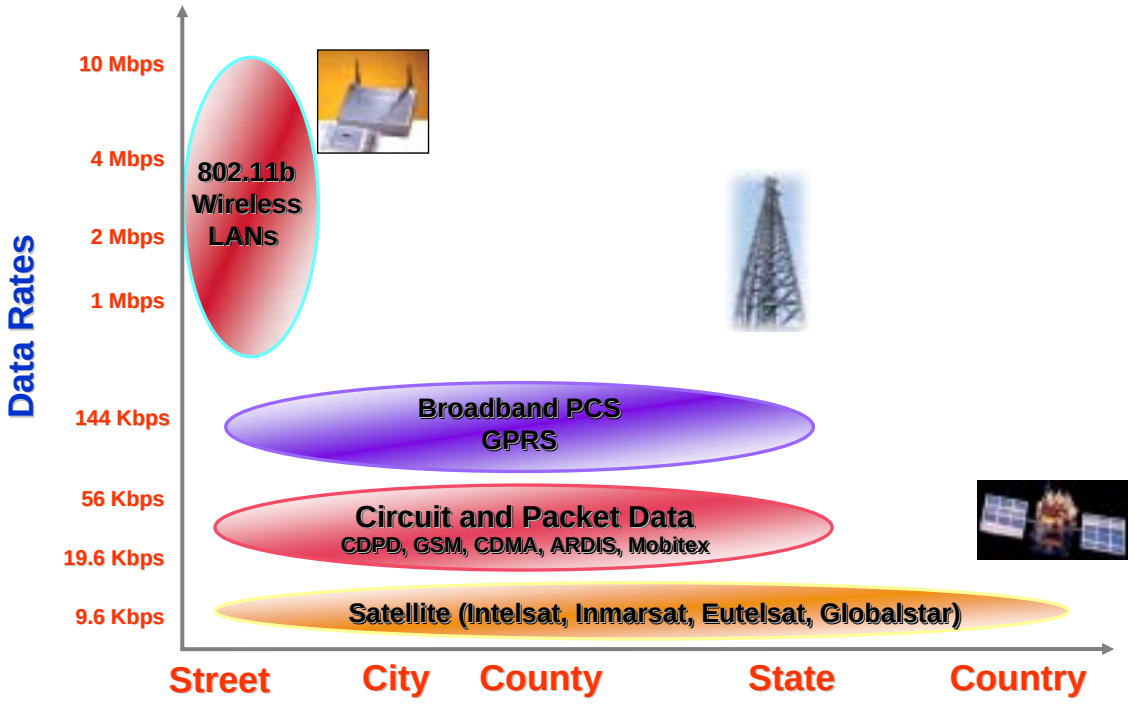
모바일 환경에서의 일반적인 고려 사항 1
안정적인 무선 기술



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모바일 환경에서의 일반적인 고려 사항 2
Form Factor

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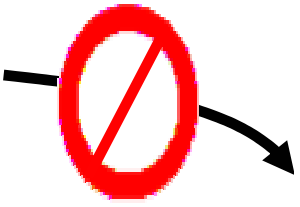
전통적인 네트워크 장비

현장에서의 요구 사항

- DC Power
- 작은 크기
- 가벼운 무게
- 불안정한 환경에서의 활용 가능성



현장에서도 구현 가능한 확장성 있는 네트워크 장비 필요

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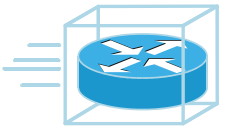
모바일 환경에서의 일반적인 고려 사항 2
Form Factor - 계속

Cisco 3200 Form Factor

- 작은 사이즈/ 가벼운 무게
- 모바일 환경에 적합한 디자인 구성
- 높은 성능
- 유연성 있는 모듈 방식



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모바일 환경에서의 일반적인 고려 사항 3
보안성

- 보안을 유지 하면서도 고성능 엑세스를 가능하게 함
- **Cisco 3200은 Cisco IOS software의 엔터프라이즈급 보안 기술을 제공**

Access

Connectivity
Performance
Ease of Use
Manageability
Availability

Policy Management

Security

Authentication
Authorization
Accounting
Assurance
Confidentiality
Data Integrity

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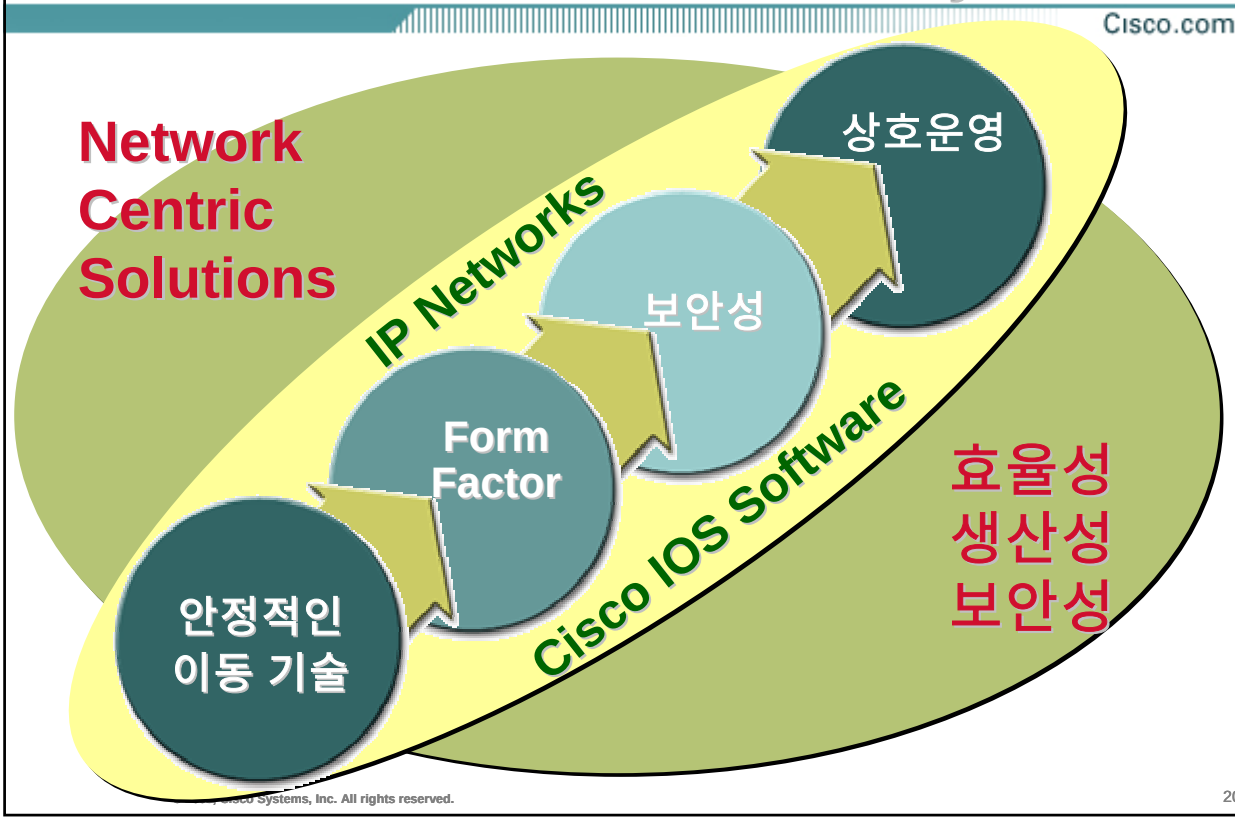
Cisco Network 중심의 Mobility



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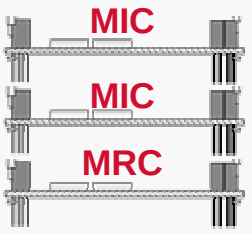
Cisco 3200 Mobile Access Router – 계속

- **Mobile Access Router Card (MARC)**
  - –High performance processor
  - –One 10/100 Ethernet
  - –One console
  - –One powered async serial (for GPS)
- **Mobile Interface Cards (MICs)**
  - –SMIC: 4 sync/async serial
  - –FESMIC: FE/E Switch Card



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Cisco 3200 Series 모델 비교

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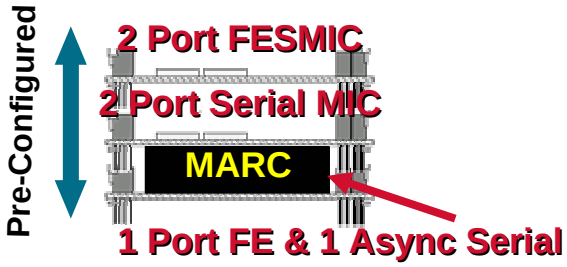
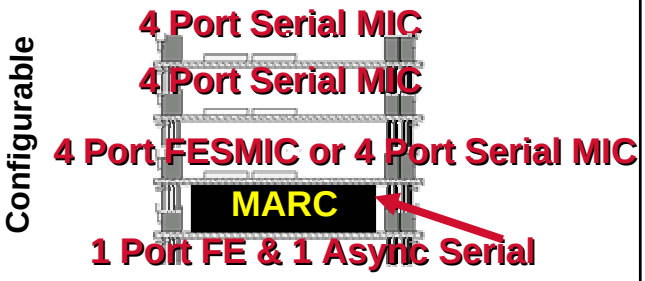
Cisco 3220 Mobile Access Router



- 2 Port FESMIC
- 2 Port SMIC
- No Options for SMIC or FESMIC
- Future Upgrade to Integrated 802.11 Interface Card
- 3DES PLUS Image Included

• Targeted for mass deployment public sector and commercial transportation markets

Cisco 3250 Mobile Access Router



- Completely Modular 3200 Series
- 4 Port FESMIC
- 4 Port SMIC
- Options for Mobile Interface Cards Combinations
- Future Upgrade to Integrated 802.11 Interface Card

• Targeted for deployment in Defense applications & large scale projects and command & control vehicles

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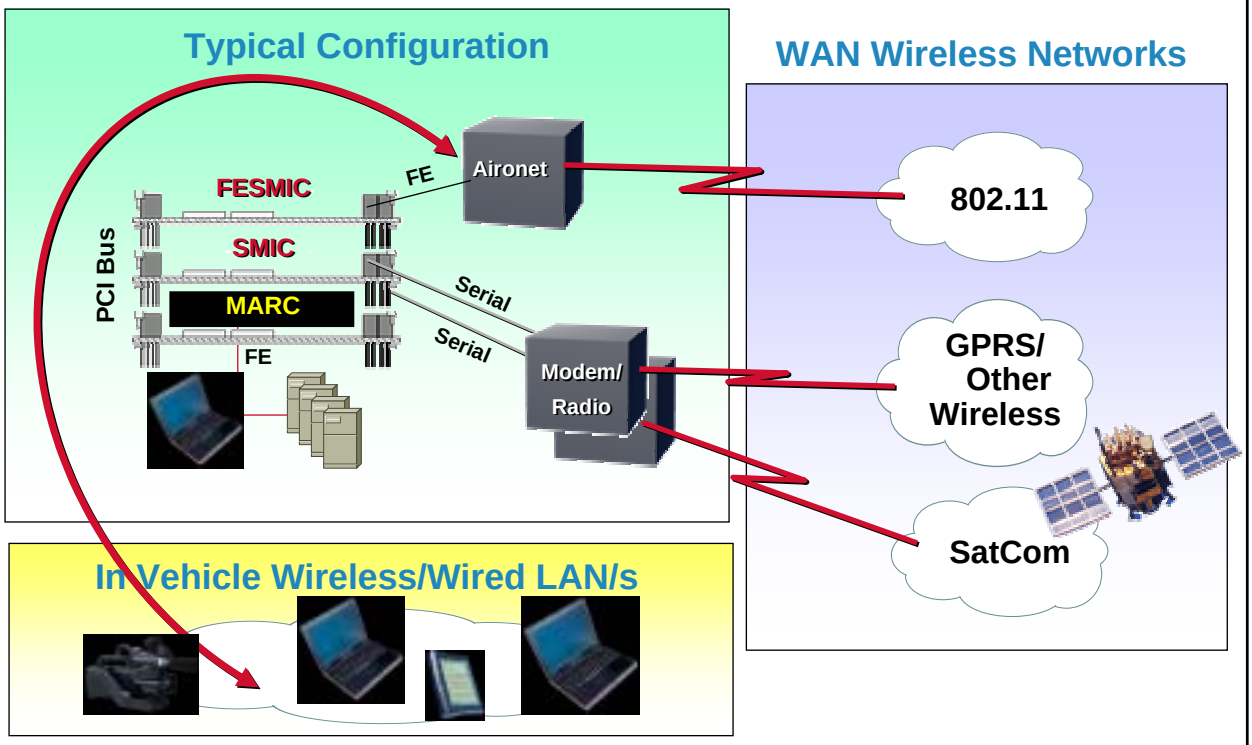
구현의 예



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