Mobile WiMAX Network Architecture

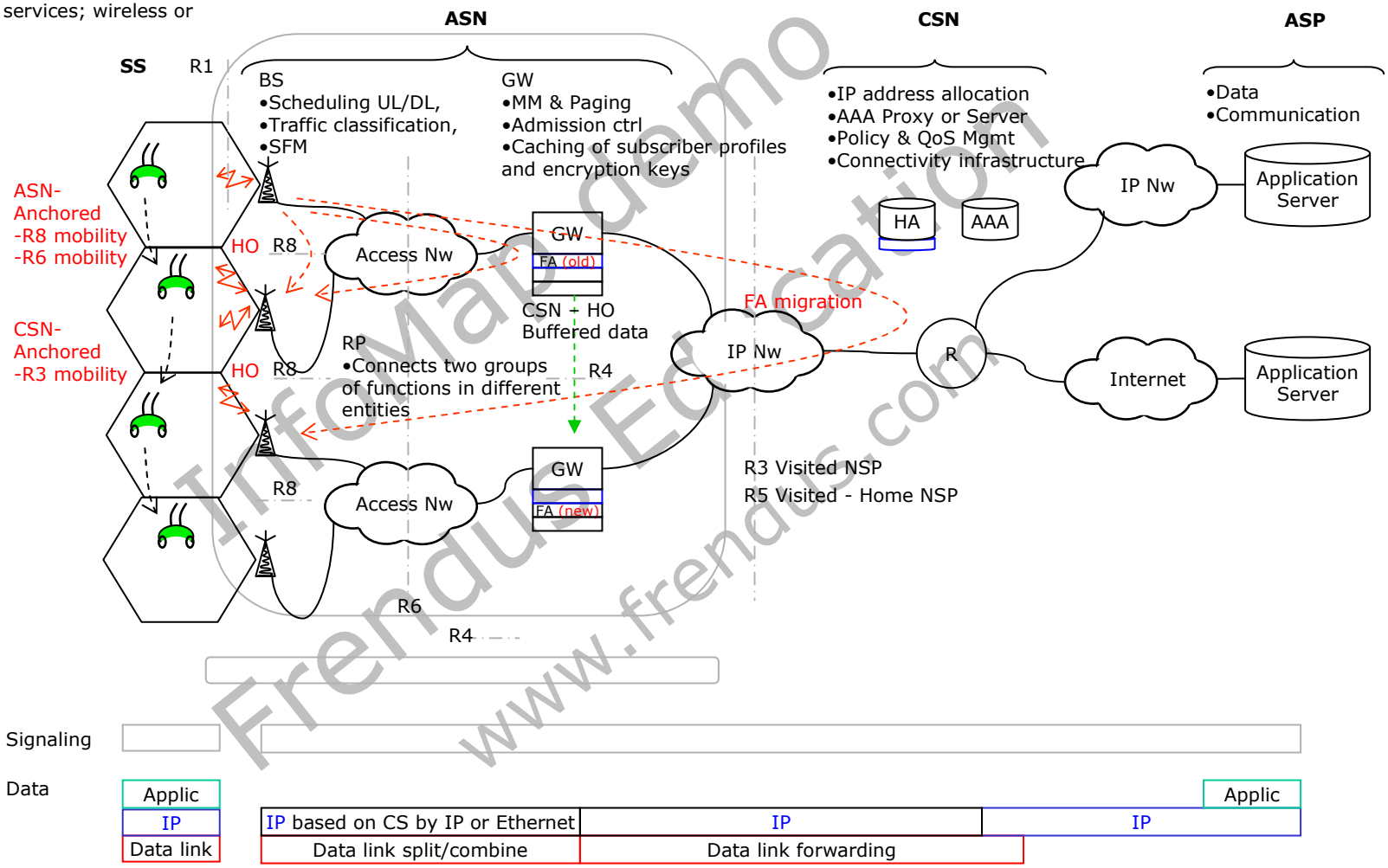
Design principles
- Functional decomposition; well defined reference points
- Deployment modularity; centralised, distributed, hybrid
- Usage models; fixed, nomadic, portable & mobile
- Decoupling of access and connectivity services
- Support access to other services; wireless or fixed solutions

Initial Processes
1) Network discovery
-scan for DL ch's; BS
-synchronise; BS
-UL params; BS
2) Nw connection
-ranging; BS
-neg bearer capabilities;?
3) Authentication & Security
-key exchange; AAA
-registration; AAA
4) Data Connection
-address assignment;
ASN-GW(FA)/HA
-parameter setting;?

- Owned by NAP
- Comprises BS & ASN GW's – Profiles A,B,C
- Radio Access Network
- Radio Resource Management
- Mobility Management

- Owned by NSP (Visited or Home)
- Provides IP connectivity
- Core network functions

1) Define Nw
2) Initial Processes
3) e.g HO Procedure



AAA	Authorisation, Authentication	MAC	Media Access Control
ASN	Access Service Network	NAP	Network Access Provider
BS	Base Staion	PHY	PHysical Layer
CS	Convergence Sublayer	PLMN	Public Land Mobile Network
CSN	Connectivity Service Network	PSTN	Public Switched Telephone Network
DL	Down Link	R	Router
FA	Foreign Agent	RP	Reference Point
GW	GateWay	SC-FDMA	Single Carrier Frquency Division Multiple Access
HA	Home Agent	SFM	Service Flow Management
HO	Hand Over	UL	Up Link