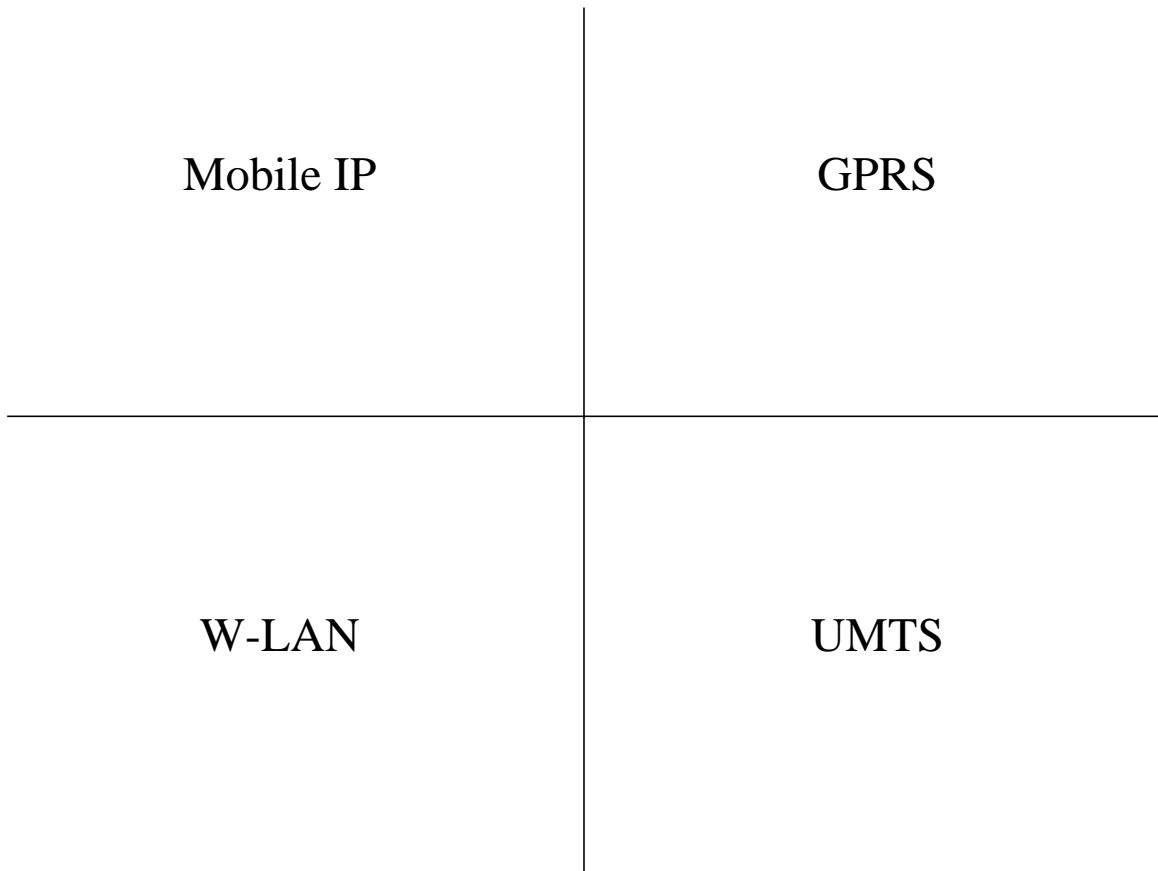


Cellular IP

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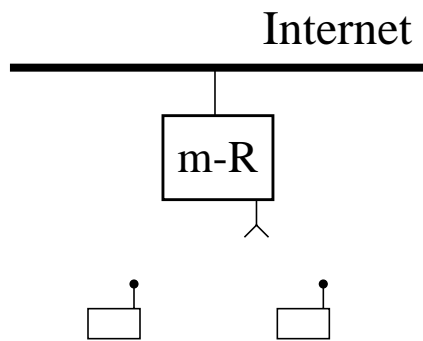
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IP Mobility

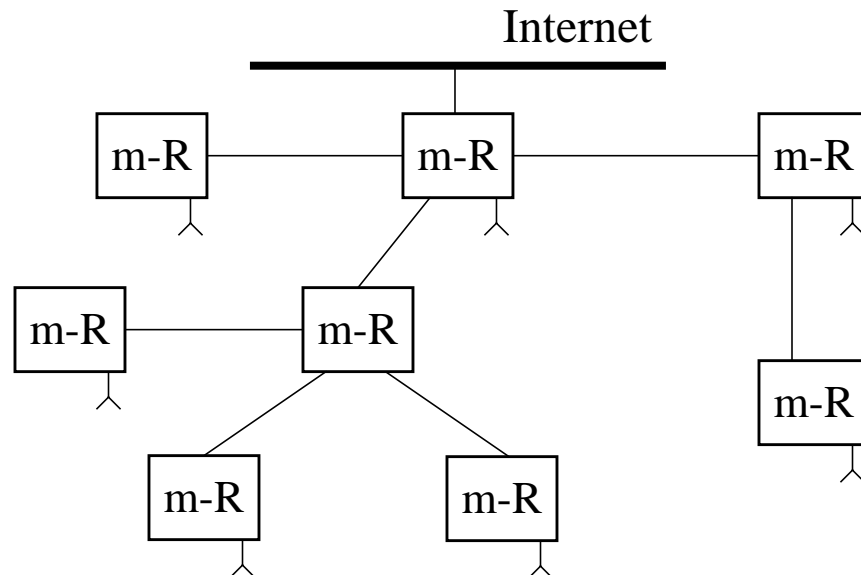


Simplicity and Scalability?

- m-Router...



- ...arbitrarily interconnected and



- ...automatically handling mobility and handoffs.

Cellular IP

A cellular wireless access network that has

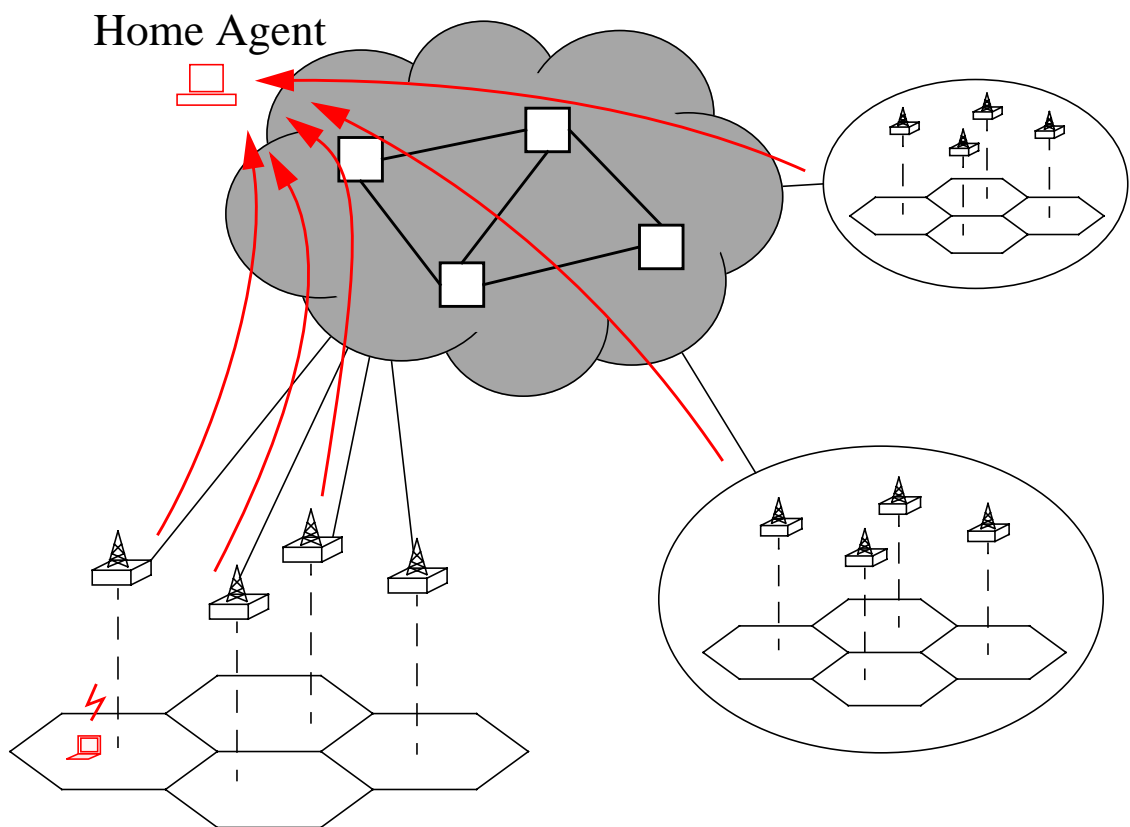
- mobility management
- paging
- handoff
- passive connectivity

...yet it has no

- central location data base (HLR)
- switching centre (MSC)
- signalling system
- notion of “connection”

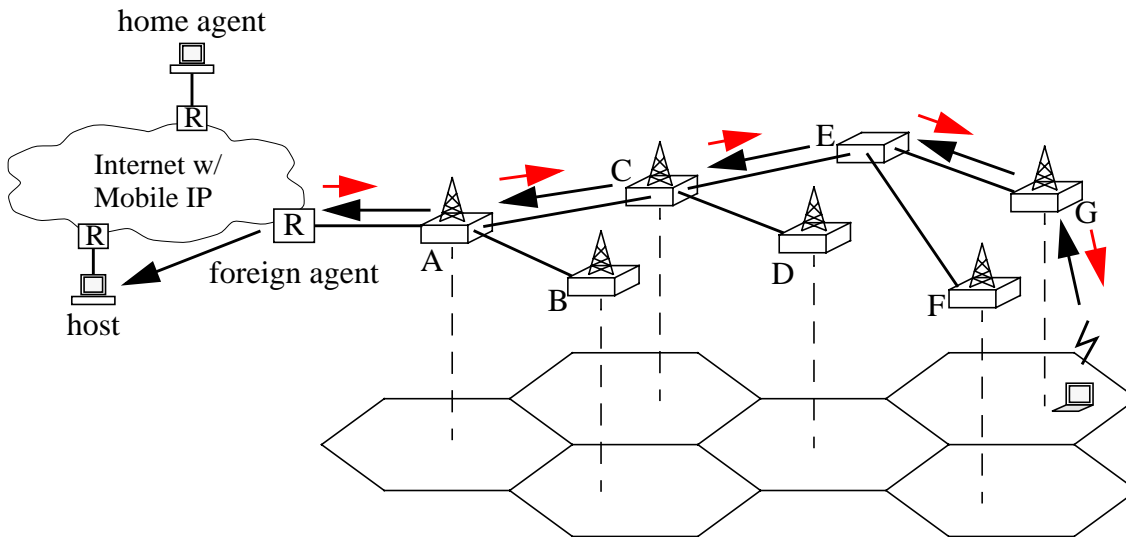
Distributed!

Mobile IP and Cellular IP

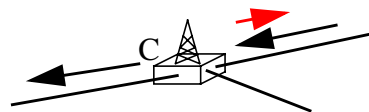


- Mobile IP not appropriate for cell-granularity, but can provide global mobility support.
- Cellular IP does not scale to a global level, but it provides fast smooth handoffs on a local scale.

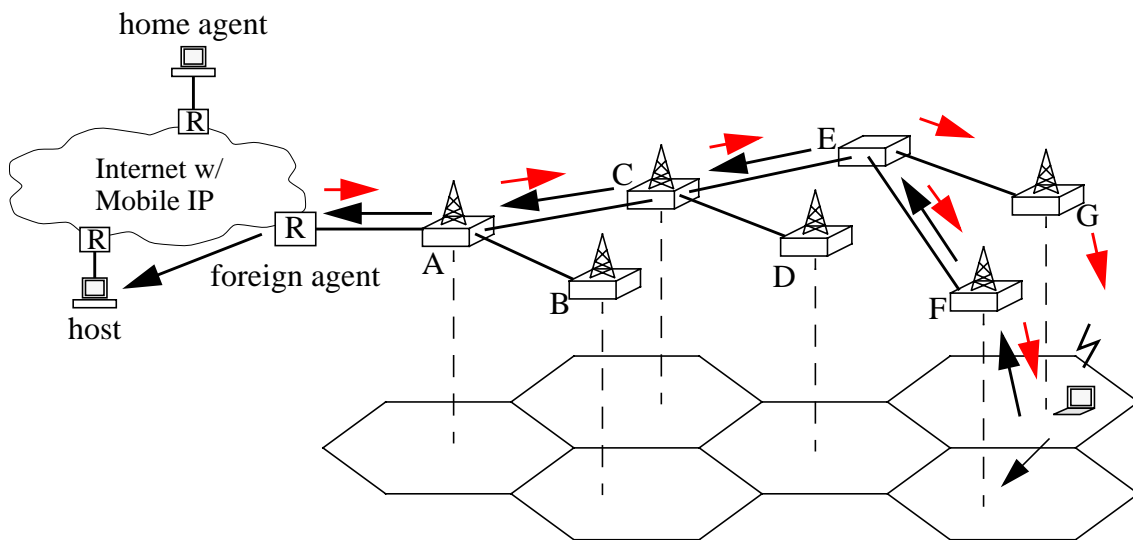
Cellular IP: Uplink packets create location information



Node is "self-sufficient":



Cellular IP: Handoff is automatic



- Redirected uplink packets create new downlink path
- Old path disappears after timeout
- No handoff control messaging, handoff does not differ from normal operation

Information

comet.columbia.edu/cellularip

draft-valko-cellularip-00.txt

ACM Computer Communication Review (January '99)

Current Work

simulations (ns): performance

implementation (FreeBSD, WaveLAN), public domain soon