WiFi: Ubiquitous & Pervasive
- Ubiquitous AP presence
- USA: 14.3 million WiFi (65% of online households) and growing
- All kinds of WiFi enabled devices
- 802.11n : 248 Mbit/s, ×2 Range

Utilize “in-situ” APs to support Mobile users

Pegasus:
- Persistent IP
- Connection IDs Stored in Pegasus DB
- Fast re-associations: Reuse connection IDs
- Able to balance the AP load
- Efficient AP selection
- Robust under intermittent connectivity
- Supports “secured” Access Points
- Can support multiple interfaces
- End-To-End Solution: no changes at APs

Setup:

However:
- Significant time to establish connection (≈10 sec)
- 250m: 30mph ≈ 18 sec, 50mph ≈ 11 sec
- A new IP for every connection
  (In a campus / large company, per group of APs & Level 2 re-associations)

References:
Frangiadakis N., Kuklov D., Roussopoulos N., “PEGASUS: 802.11 connectivity at high speed”, Globecom Workshops, 2007 IEEE
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