WIRELESS HOT SPOTS WITH LOCATION-AWARE SERVICES
By Csaba KISS KALLÓ
INTERNATIONAL GRADUATE SCHOOL IN ICT
University of Trento, Italy
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Our Project: WILMA

• WILMA: Wireless Internet and Location Management Architecture
• University of Trento and ITC-irst
• Goal: support for mobility through a wireless Internet architecture
• Research topics

http://www.wilmaproject.org/
The infrastructure

- Mobile device
- Access Point
- Database
- Hot Spot
Bluetooth: Ongoing Work

• Positioning based on the signal strength
  • No standard modality, cells
• Scatternet formation and optimization
  • Partitioning, location information
• Database management and applications
The First Results

Positioning with IEEE 802.11b

• Scenario
• Training data
• Algorithm for location estimation
• Average accuracy 178 cm
• Transparent solution
• No requirements for the mobile user
Concluding Remark

• Positioning is important for many reasons
  • Optimal path, energy consumption, applications

• Standard way for signal strength measurement in Bluetooth

• Future: improving existing results and developing new applications for the hot spots

• Questions