

# Wireless Grids

The current hype or the next  
Internet?

Scott Bradner

Harvard University  
sob@harvard.edu

wgrid - 1

## What Are They?

- “The Grid” unwired
- last mile Internet access
- ad hoc wireless nets (e.g. first responder)
- in-audience distributed concert recording
- marketing-speak for enterprise wireless net
- star network supporting wireless APs

wgrid - 2

## Categories

- just talking to an AP
- AP placement - wired backhaul
- sharing computing resources
- wireless node to wireless node “routing”

wgrid - 3

## Just Talking to an AP

- e.g. Sony TVs to join home wireless grid
- “grid” sounds better
- “grid” of devices talking to single AP

wgrid - 4

## AP Placement

- e.g. Verizon creates wireless access grid by turning pay phones into APs
- e.g. Aruba Networks Wireless Grid
- APs in a grid-ish pattern, wired backhaul

wgrid - 5

## Sharing Computing Resources

- “The Grid” done w/o wires (to some nodes) wireless “computer utility” (LK ‘69)
- Ian Foster’s grid checklist
  - coordinates resources not under central control
  - using standard, open, general purpose protocols
  - to deliver nontrivial qualities of service
- e.g., number crunching for handhelds reflections of DCE (but more *raison d’etre*)

wgrid - 6

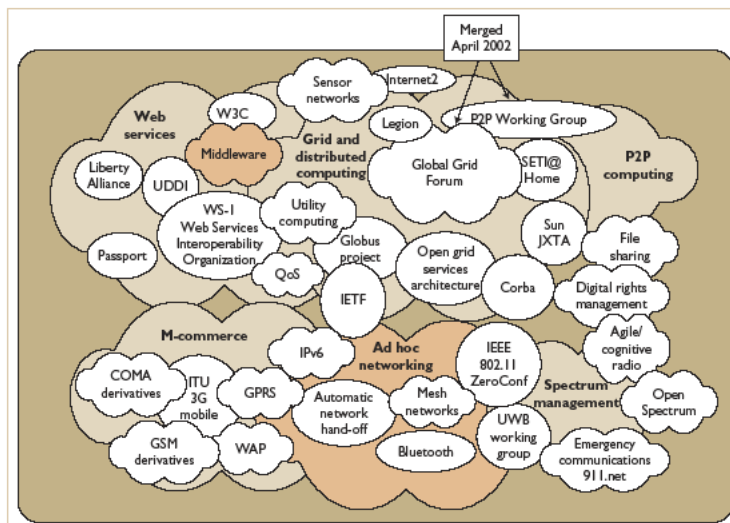
## Wireless node-to-node "routing"

- traffic forwarded by intermediate wireless nodes
  - e.g., Ricochet, Nokia RoofTop, Teledesic, first responder's net, sensor nets
- can be ad hoc or designed node configuration



wgrid - 7

## Term/Standards Environment



from IEEE Computing

wgrid - 8

## Summary of Overview

- hype
- wishful thinking
- confusion
- buzzwords
- more hype
- some useful stuff
- some maybe not useful stuff

wgrid - 9

## Useful Stuff (imho)

- last mile Internet access  
fixed or ad hoc, wired or node-to-node  
but business model hard (compete with free)
- sensor nets  
battlefield, first responder, environmental

wgrid - 10

## Not Useful Stuff?

- “computer utility” (sorry Len)  
except for distributed access to data  
wireless **Grid** is DCE/WAP thinking

wgrid - 11

## Future

- (just) more tools on path to the ubiquitous  
“Internet”  
but most of these tools will be used
- a 2001 view  
“I expect that most of the Internet will be  
unaffected by the grid vision. Remember that  
one of the big strengths of the Internet is that it  
can support any number of limited use visions  
like the grid.”

wgrid - 12

sob 8/13/2001 Network World