

The coming age of Calm technology

- Published in 1996
- Notions of
 - Mainframe – many people share a computer
 - Personal computer – one computer per person
 -internet, distributed computing.....
 - Ubiquitous computing – many computers share us



The periphery

- A calm technology will move easily from the periphery of our attention to the center and back
- Examples
 - Inner Office Window
 - Internet Multicast
 - Dangling String

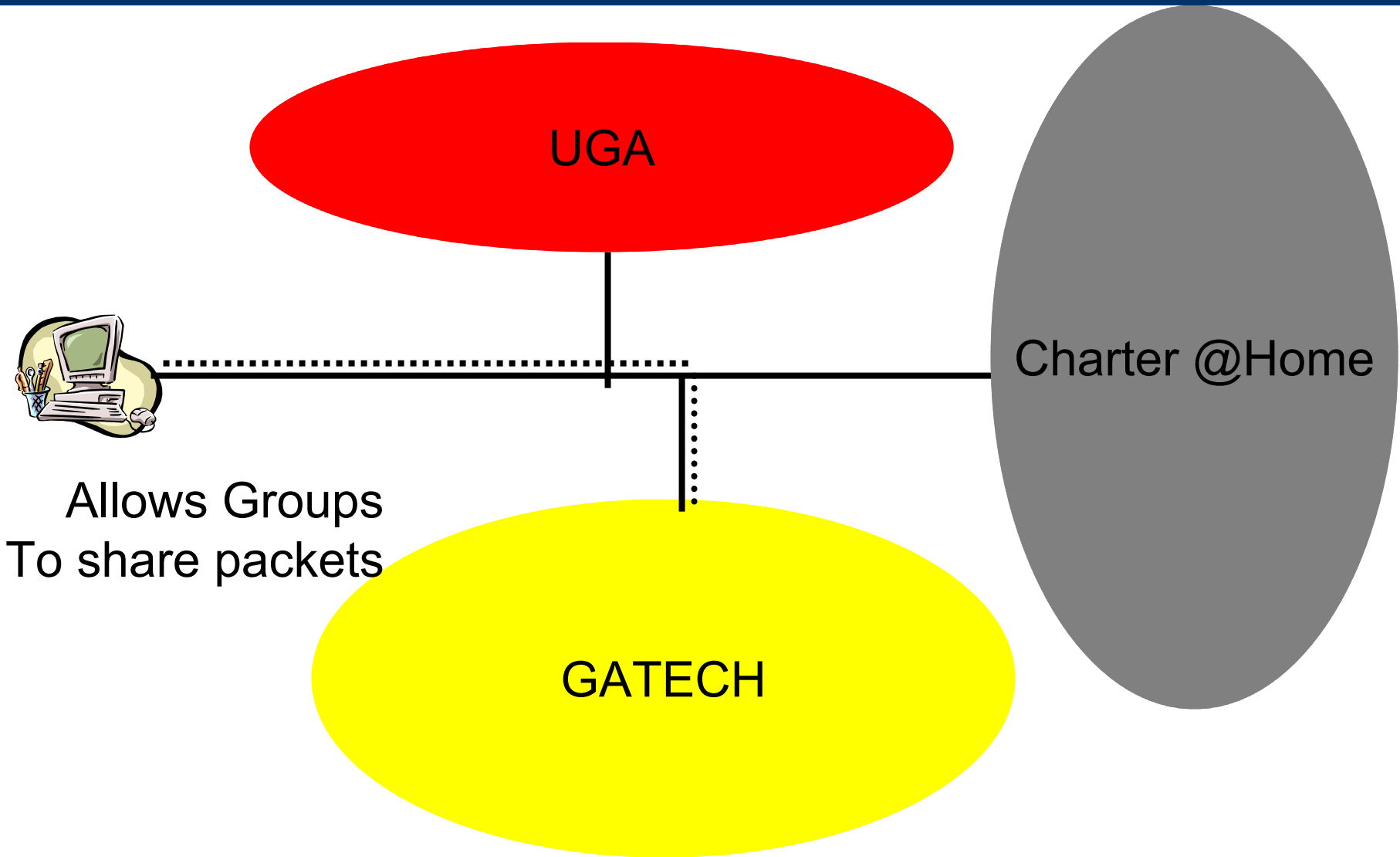


Inner Office Window

- Notion of connectedness
- Boundary well defined



Internet Multicast



Internet Multicast

When UGA joins
packets are **not**
duplicated

UGA



Allows Groups
To share packets

GATECH

Charter @Home

Dangling String

- Small motor connected to ethernet
- Whenever a packet goes by, it twitches
- With a busy network it whirls along



“Future”

- 10 million pixels (80 dpi over several feet)
 - Still too expensive
- Embedded processors
 - 1 billion operations / sec low power
 - Reality: Hitachi SH4 – 200MHz low power
- Matchbox size removable hard drives at 60 MB
 - Reality: 1 GB microdrive



“Future”

- 1000x800 high contrast display



“Future”

- Remove fixed configuration of devices
 - Universal plug and play, Jini etc..
- High speed wireless networks everywhere
 - 3G wireless networks upto 384 kb (deployment slow)
- Close range wireless networks
 - Bluetooth, HomeRF
- Wireless LAN
 - 802.11b (11 Mbit – right here in the class)



Missed technologies

- World Wide Web
- Is WWW ubiquitous?

