



# **User Centered Evaluation of the Access Grid**

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# Overview

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- Motorola Labs and the Access Grid
- Goal 1: Understand AG usage
- Goal 2: Answer specific research questions
- Goal 3: Improve AG Node User Interface

# Motorola Labs and the AG

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- About me...
- The User Centered Research group
- The “Collaborative Spaces” project



*AG Node demo, September 2000*

# A 'Collaborative' Space is...

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A **physical** location, supporting **collaboration** by:

- **connecting** people in different locations
- communicating **awareness** of others' activities
- conveying a sense of **presence** or “being there”
- building relationships through **persistent** connection

# Goal 1: Understand AG Usage

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- Real-world data collection
  - on-site observations
  - observations over the AG
  - user survey
  - automatic data logging
- Purpose is to...
  - understand who is using the AG and for what
  - investigate backchannel (MUD) usage
  - identify issues appropriate for closer study

# Understanding the user's world...

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- Observe the user like:



*Margaret Mead conducting field research in Bali, circa 1957*

- Borrowing from cultural anthropology...
  - Go where the users work
  - Watch the actual users work while they work
  - Ask questions about it
  - Capture it: record it, get samples, etc.

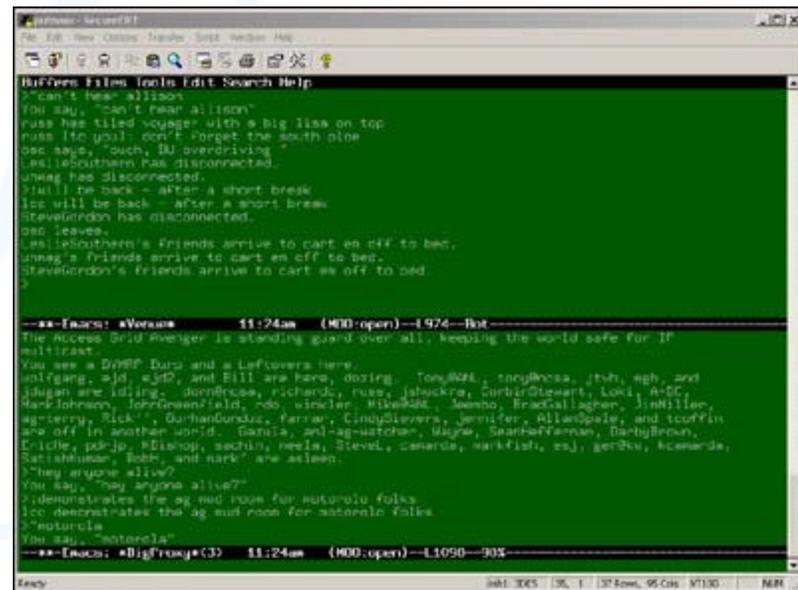
# Automatic Logging

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- How to measure AG participation?
  - chat logs
  - frequency/ content of use
  - session management activity
- Ways to analyze logged data
  - code types of activities
  - state transition and time allocation diagram
  - content analysis of discussion
  - look for patterns of activity

# Issues

- observation should take place over long periods of time
- multiple people in several physical locations to observe simultaneously
- issues with recording and informed consent (both video and logging)
- logging can be expensive and time-consuming to implement



```
gopher-secure01
File Edit View Options Window Help
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Buffers: Files Icons Edit Search Help
>? can't hear allison
You say, "can't hear allison"
ross has tiled voyage with a big line on top
ross ltc you! don't forget the south pine
pac says, "ouch, I'm overdriving"
Les.leebouthen has disconnected.
Les.leebouthen has disconnected.
Jung has disconnected.
I'll be back - after a short break
I'll be back - after a short break
Steveldordn has disconnected.
pac leaves.
Les.leebouthen's friends arrive to cart en off to bed.
Jung's friends arrive to cart en off to bed.
Steveldordn's friends arrive to cart en off to bed.
>
-----
** Emacs: *Vortex* 11:24am (M00:open) -1974-80X
The Access Grid Avenger is standing guard over all, keeping the world safe for IP
multiplex.
You see * DWRP Duro and a Leftovers here.
enligant; eid; *JD; and Ell are here, dozing. Tony@FF; tony@kca; jsh; sgh; and
Jdugan are idling. Jondrea; richard; russ; shuckra; CurtisStewart; Loni; A-DC;
MarkJohann; Joffmanfield; rdo; wincler; Mike@K; Memo; BradGallagher; JimMiller;
ag-erry; Rick; GarbanGunduz; Ferrar; CindyGlevers; Jennifer; AllanSpale; and tuffin
are off in another world. Garza; ani-ag-uztohan; Wayne; SeanJefferman; DanByBroun;
EricLyle; pd-jp; KItshop; seclin; neela; SteveL; Camara; markfish; raj; ger@w; kluarda;
SachinSharma; bob; and nark are asleep.
>? hey anyone alive?
You say, "hey anyone alive?"
?demonstrates the ag mud room for motorola folks
!cc demonstrates the ag mud room for motorola folks
?motorola
?motorola
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** Emacs: *BigFroxy* C3 11:24am (M00:open) -11090-90X
Ready 041 305 36 1 37 Esc 95 Cnt 07100 MEM
```

## Goal 2: Research Questions

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- Proposed 'focus' research
  - aid coordination of speaking turns
  - provide awareness of how one's location appears to others
- The 'video quality' question
  - how much is enough?
  - well... enough for what, exactly??
- Enabling technology research
  - System: simplification, reliability, security/ encryption, integrate wireless devices
  - Video: delay, quality, synch with directional audio
  - Multicast: performance, many-to-many scalability, dynamic QoS

# Other Ideas

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- Immersion and audience immediacy
  - does increasing immediacy result in a greater feeling of shared space? does this really matter?
- Anonymity and privacy
  - how do these factors impact trust formation, essential for effective and high-performing groups
- Selective attention and information overload
  - how much is really too much for an AG display? how can organization help?

# Issues

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- Recruiting participants is complicated by the fact that a group is needed each time!!
- Hard to duplicate real conditions of use in an experimental setting
- Representative sample – who are the users?
- Technology is presently somewhat unreliable
- Coordinating between multiple sites is problematic

## Goal 3: AG Node User Interface

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- Nodes are just plain hard to run
- Usability testing to identify interface problems
- Needs to wait until the other two goals are at least partially met

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# Issues

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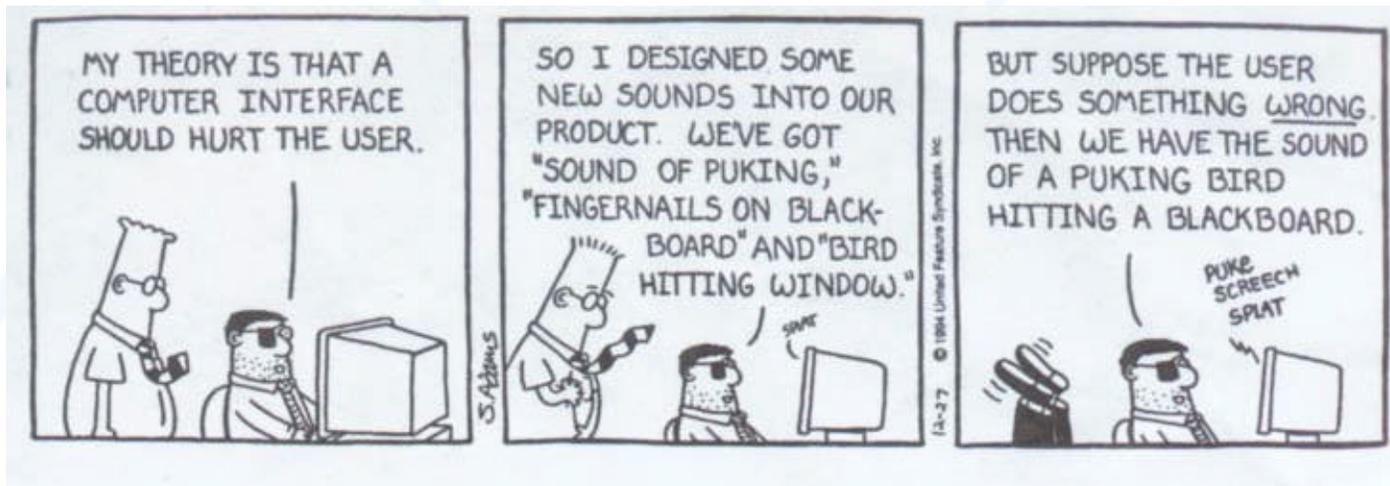
- Same issues as experimental studies:
  - a group is required for each session
  - hard to duplicate real conditions of use
- Won't yield useful results until the system is more robust

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# The End!

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