

Public Organ

by Carla Scaletti 1995

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- **Alte Schmiede**

Public Organ

<http://www.prairienet.org/~scaletti/PublicOrgan.html>

The human brain is the most public organ on the face of the earth, open to everything, sending out messages to everything... We pass thoughts around, from mind to mind, so compulsively and with such speed that the brains of mankind often appear, functionally, to be undergoing fusion.

- From THE LIVES OF A CELL by Lewis Thomas.
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Ideas behind the piece

- Collective thinking, mutual alteration, & hybrid ideas
- Human language building \Leftrightarrow insect nest building
- Looping
 - like dream or sensory deprivation chamber
 - Cut off from fresh input and interaction, the brain loops on stored memories, crossing them with each other until they gradually degenerate
- Lurking
 - Watching, taking in information without participating in return
- Linking
 - Full interaction and mutual alteration between individuals

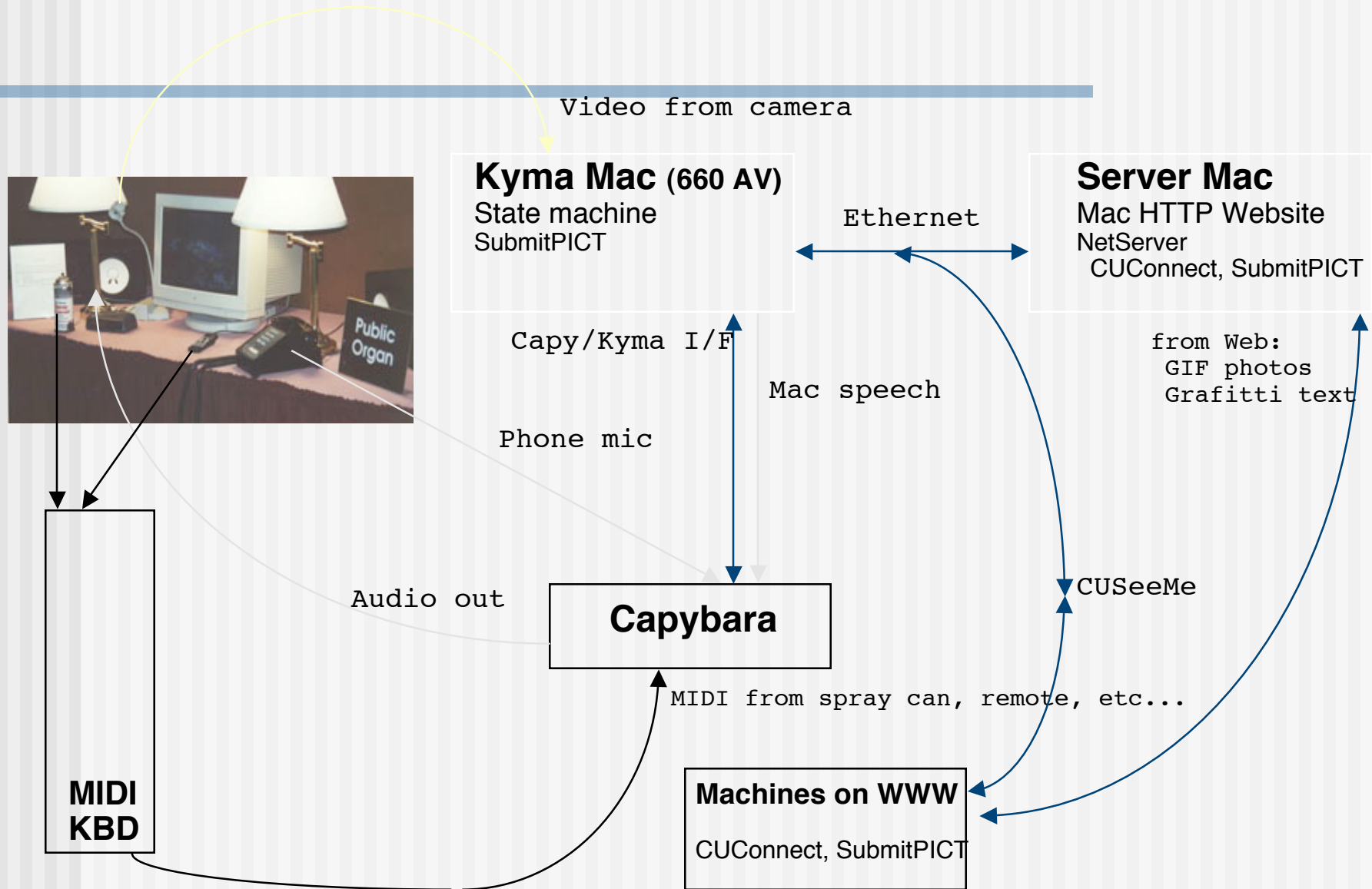
Ideas behind implementation

- Use everyday objects of communication to bring out differences between *broadcast* (TV, radio), *point-to-point* connection (telephone) and the *network* (WWW), not to mention books & graffiti!
- Presentation of the piece and the relationship of the piece to the audience should also reflect the ideas (piece should rely on audience participation and interaction with each other, not be a passive broadcast from the stage)
- All sounds should be based on human speech or phonemes

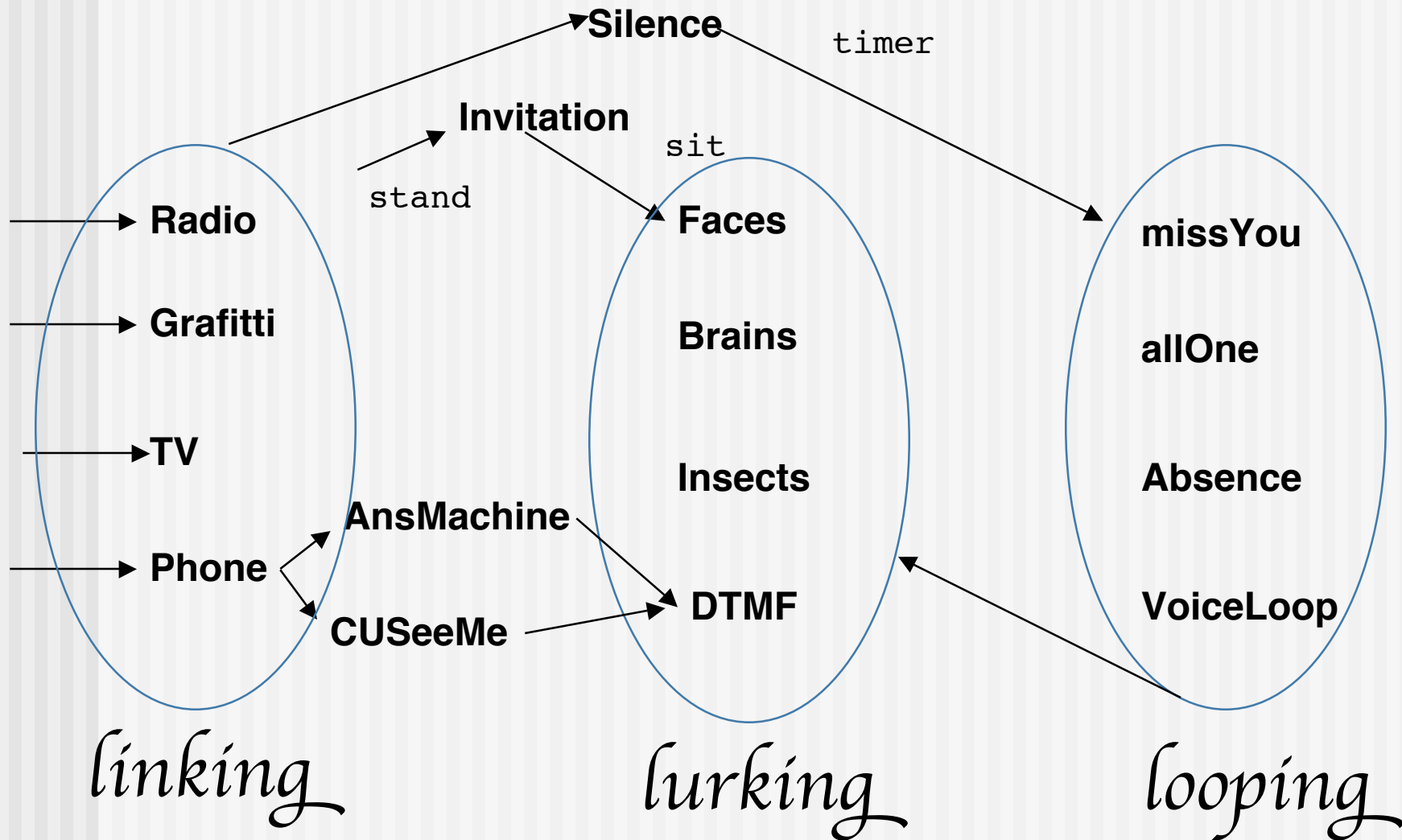
Physical Setup



Under the table...



State machine



Invitation



MacSpeech text

'Please have a seat!'

'Please. Sit down. Make yourself comfortable!'

'Hey. Sit down in the chair!'

'Go ahead! Grab a chair!'

'Have a seat!'

'Why don't you sit down and relax.'

'Relax! Have a seat! Make yourself at home!'

- Screen
 - Black, random color lines

Faces

I am here. I am I.

- Sitting on chair triggers
 - LastPicture <- still from video camera
 - Append LastPicture to front of QuickTime Movie
 - Go into Faces state
 - Play Faces QT
 - Play Faces Sound
 - MIDI files, stretched MacSpeech Markov phonemes
 - Display texts

Silence

Nature abhors a long silence.

MissYou

I miss your telepresence,
The sweet curve of your parenthetical smile,
Subtly rearranging the flux patterns on my hard disk,
Electronic ephemera,
As painfully fleeting as music in air,
Exponentially decaying into the noise,
Until I am one, all one, alone.

- Display LastPicture, random points
- Play MissYou Sound
 - Stretched out MacSpeech, Filtered noise

Grafitti

- Print Lewis Thomas texts in blue
- Get a grafitti string from the network
 - If it fails, use the default string
- Print grafitti, one at a time, in red over the blue text
- Play grafitti Sound
 - Evolution from unvoiced->voiced->nasal->vowels
 - Extreme frequency scaling
 - Using phoneme as envelope in frequency scaler

Absence

In your absence,
My brain feeds upon itself,
Endlessly looping,
Until statistical degradations,
Overwhelm your signal.

- QuickTime of brain sequence from WWW
- MacSpeech (Kathy @ very low frequency)
- Absence Sound
 - Mac voice into feedback loop
 - Sample loops smaller over time

Radio

Baby, baby,
Oh yeah, yeah,
I am dangerous
To plants and babies
Yeah, right, yeah right, right
Yeah...

- Single frame quicktime of radio
- Ralph voice stretched
- MIDI files (played along with Ralph)

Alone

I am one, All one, Alone

- MacSpeech
 - Break up into phonemes
 - Lengthen vowels by 6 times
 - Generate Markov chain using frequencies in original string
- Alone Sound
 - Sum-of-Sine resynthesis of same phonemes spoken by Kurt
 - Extreme time stretching

TV

I want my MTV, but does MTV want me?

When I turn on my TV,
It makes me know people who do not know me.
It makes me a lurker.
It makes me a stalker,
A watcher of people who do not care to watch back.

I want my MTV, but does MTV want me?

I am the star of my show. My co-stars are the people I know.
Let's point the cameras at ourselves and shout,
"Hey, I am here!"

Unplugged by MTV. My MTV does not want me.

- MacSpeech & MacSpeech processed through Kyma
- MIDI files to match the pitch contours of MacSpeech

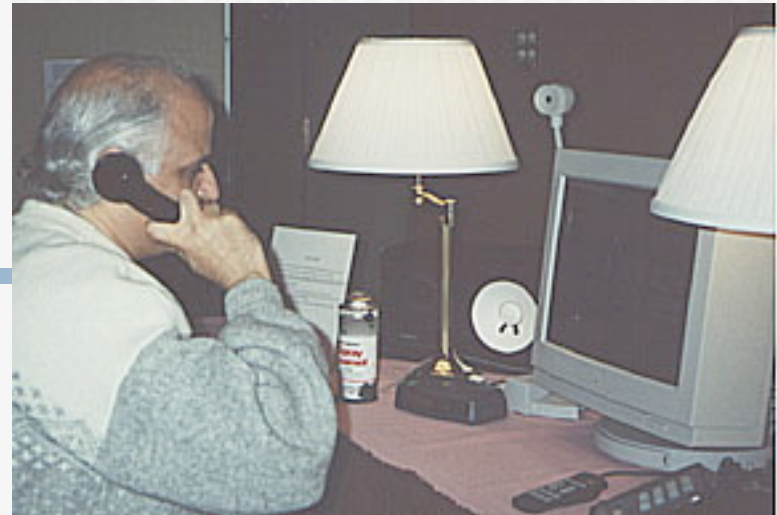
Insects

- Insect QuickTime movie
- Random color points
- Insect-related Texts from Lewis Thomas
- Insect Sound
 - Filtered noise ostinato from contour of AllOne
 - Phoneme sample [g] w/changing loop points
 - Phonemes evolve
 - hissing->clicking->humming->buzzing

Hello State

- Play Dial Tone
- Check if someone is waiting in CUConnect
 - Open TCP connection on port 2031 & say you want to talk to someone
 - If no one is there, go to AnswerMachine
 - If someone is there, go to CUSeeMe State

AnswerMachine



Hi, this is Ralph. I can't come to the phone at the moment, but if you leave a message, it will get back to you...someday.

■ AnswerMachine Sound

- Ralph, Beep
- On threshold, record 3 seconds in file *localTemp*
- Process voice until phone on hook
 - Time expansion & feedback
- Rename *localTemp* to *recN*, where N is the current recording

CUSeeMe



- Start CUSeeMe direct to IP address supplied by server
- CUSeeMeSound
 - On threshold, records 3 seconds
 - Processes voice with feedback, louder & louder
 - Sounds like a crowd of people

DTMF

- QT movie of telephones
- Draw random connections
- Texts on communication
- DTMF Sound
 - DTMF signalling tones
 - Recordings captured from AnswerMachine & CUSeeMe

VoiceLoop

- Last picture
- Random color points
- Last recording in infinite, degenerating feedback
- Then looped in smaller & smaller loops

Brains

The human brain is the most public organ on the face of the Earth
Open to everything, sending out messages to everything, everyone,
everywhere, anyhow

The great mass
Of human minds
Around the earth
Seems to behave
Like a coherent living system

We are becoming a grid, a circuitry around the Earth.

- Images: Brain & Network movie
- Brains Sound
 - Text turned into time-varying filter
 - First, noise fed into slowed-down filter, changing loop sizes
 - Middle: drum loop fed into the filters
 - Ending: more changing loop points

Example State

State

```
name: #Grafitti
entryActions: [self clearTV.
  TextRectangle := (Rectangle origin: 10@100 extent: 630@380).
  NetworkedGrafitti := true.
  TextCategory := #selectGrafittiThread.
  self getTexts.
  self paintString: self nextText.
  self getGrafitti.
  self playSoundNamed: 'Grafitti'.
  LastQTime := Time now asSeconds]
stepActions: [(Time now asSeconds - LastTextTime) > 3 ifTrue: [
  self paintNextGrafitto.
  LastTextTime := Time now asSeconds.
  (Time now asSeconds - LastQTime) > 27 ifTrue: [
    self clearTV.
    self paintString: self nextText.
    LastQTime := Time now asSeconds]]]
exitActions: [SignalProcessor stop]
transitions: (Array
  with: (ConditionalTransitions
    condition: [OnHook == 0]
    transition: #Hello)
  with: (ConditionalTransition
    condition: [Chair == 0 and: [MinChairTime < Time millisecondClockValue]]
    transition: #Invitation)
  with: (ConditionalTransition
    condition: [Radio == 1]
    transition: #Radio)
  with: (ConditionalTransition
    condition: [TV == 1]
    transition: #TV)
  with: (ConditionalTransition
    condition: [AtSoundEnd]
    transition: #Silence))
```


Color scribbles

- Random points
- Random paths

Making the Mac Sing

- Use SpeechManager to turn text into phonemes
- Insert prosodic characters into strings
 - Lengthen
 - Base pitch
 - Rate
- Create new, random strings of phonemes with same transition probabilities as original phoneme string

Evaluation

- Composer's experience
 - Like waiting in the green room for four days
 - No moment of applause or boos
- Audience expectations
 - Brought out channel-surfing behavior
 - Expectations of fast-moving "game"
 - Expectations of a simpler interaction
- How it is different from a concert performance
 - No public, shared experience of the piece for composer & audience
 - But those who were interested could do it over and over again or revisit selected sections
- Composer & Audience
 - Good performers are rare in the general population
 - In PO, audience explores what is there but does not "perform" it
 - Audience literally becomes part of the piece (captured images & recordings of their voices & Internet graffiti)

Future

- Enhanced CD version