Improvised Music
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- Live music is a way of communicating
- At least three senses are activated:
  - Hearing
  - Sight
  - Touch
- Improvisation bypasses thinking
- Connection between players is fragile
Eye-contact
Eye-contact
Sound

- Quality
  - Amplified vs. acoustic
  - Audio vs. MIDI
  - 44.1 KHz
- 10 ms latency limit
  - Or at least a consistent short latency
Recording studio model 1

- Everyone plays in the same room
Each player is isolated in a sound booth
Network Solutions !?

- Short / long distance communication ?
- Slow / fast network ?
- 2 / 5 / 100 players ?
Network solution 1

- Short distance / fast network
  - High fidelity audio and video
Network solution 2

- Short distance / slow network
  - Synchronized Metronome
  - MIDI or Analysis / re-synthesis (0.526 Kb/s)
    - Original singing voice
    - Synthesized singing voice
Network solution 3

- **Long distance / fast network**
  - Constrain the type of music: loop
  - Delay and sync to the next loop
Network solution 4

- **Long distance / slow network**
  - Send instructions/material (sounds, etc.)
  - Limited but opened to non-experts and to more people simultaneously
  - A central system must take decisions and broadcast to all players (client-server model)
  - Could possibly be “unconscious music”
So what?

- It can’t be really like that!