BEYOND PERFORMANCE AND CHALLENGES FOR THE FUTURE

Juan-Pablo Cáceres

Network Musical Performance Workshop

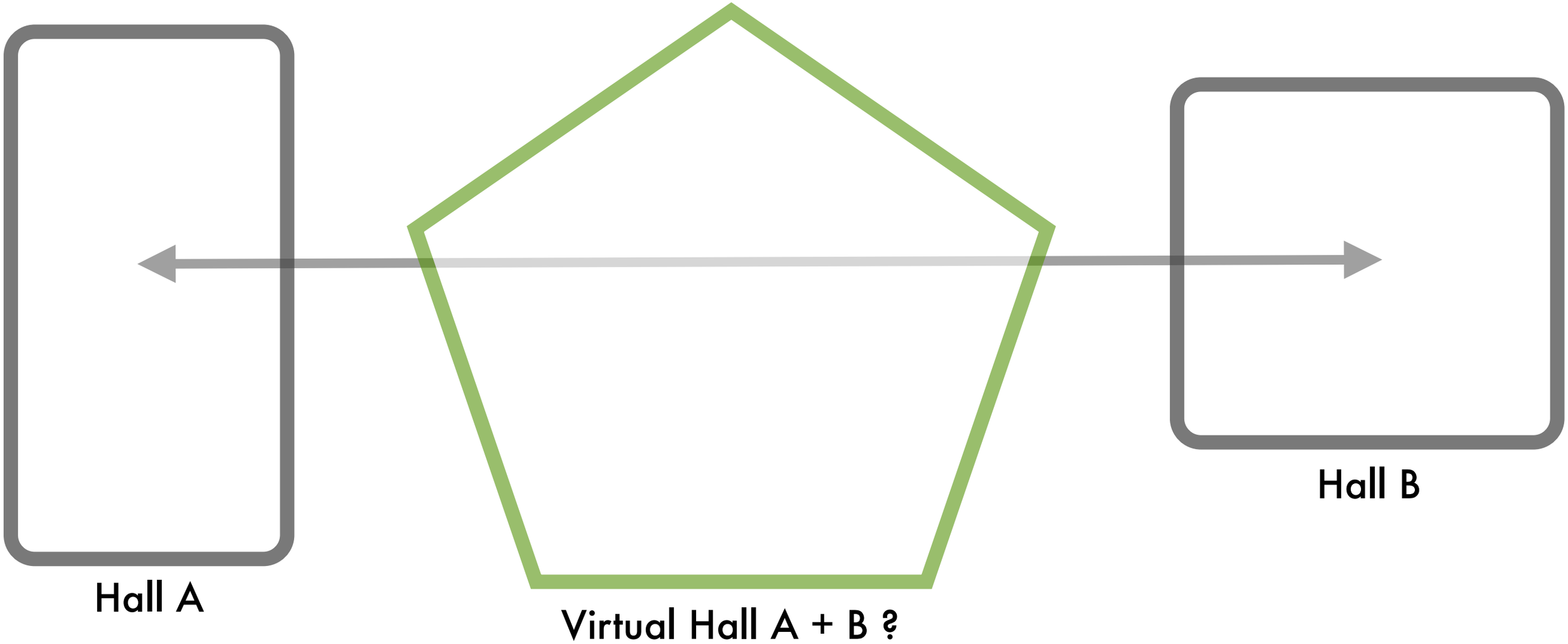
Technical and Artistic Strategies to Perform Around the Globe

Center for Computer Research in Music and Acoustics (CCRMA)
Stanford University

Acoustics Extension

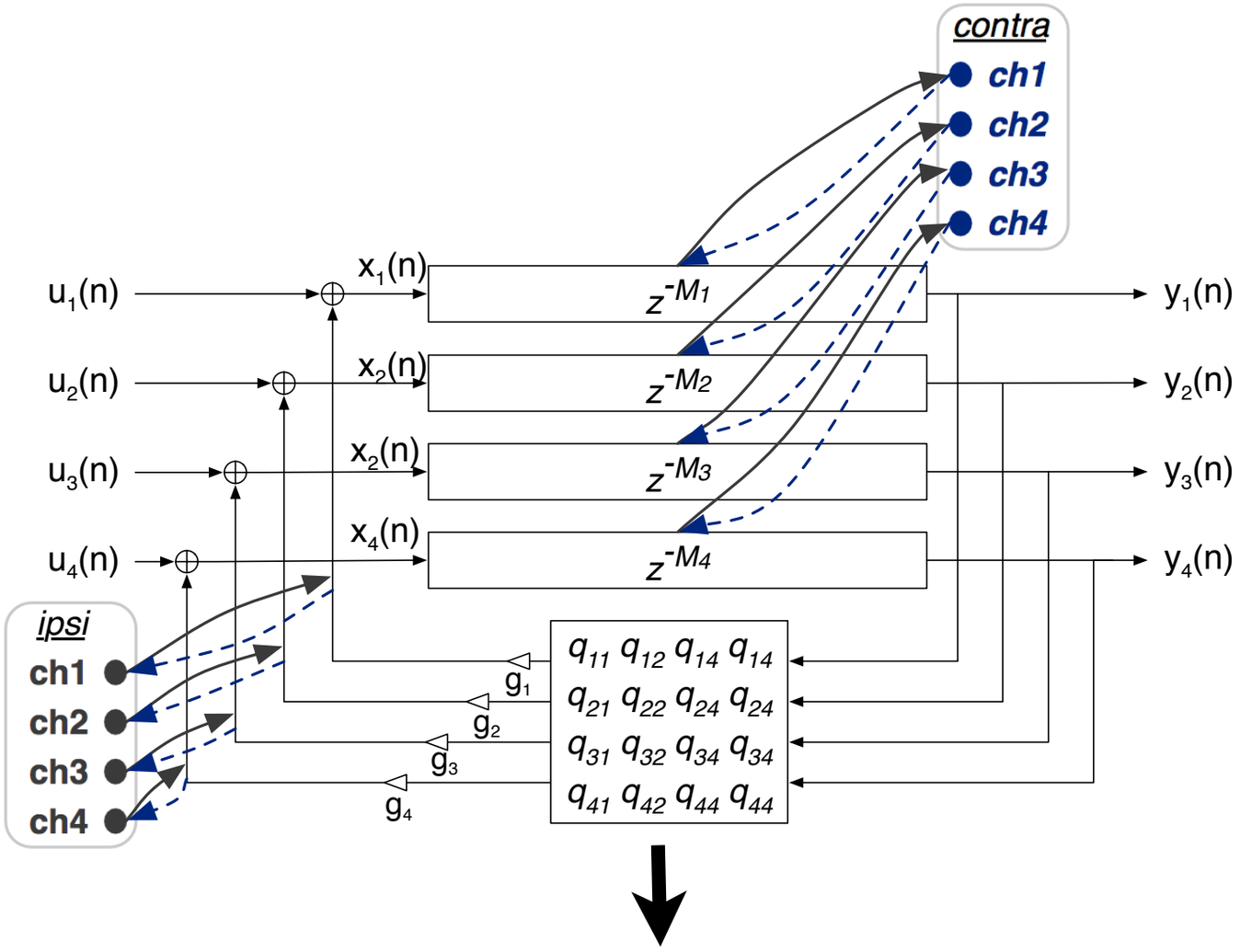
Juan-Pablo Cáceres | CCRMA | Stanford University | jcaceres@ccrma.stanford.edu

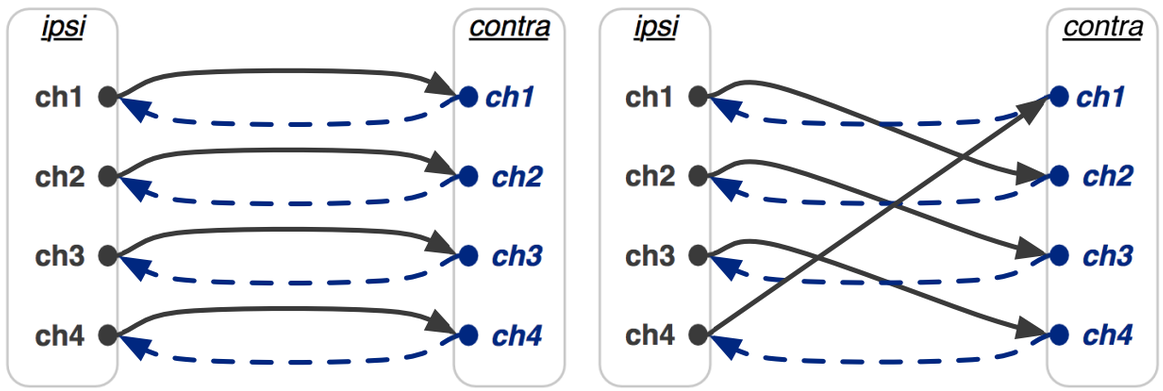
Remote Acoustics: the Meta-Hall



Juan-Pablo Cáceres | CCRMA | Stanford University | jcaceres@ccrma.stanford.edu

Acoustics Extension: Effects *IN* the Network





a) No spatialization

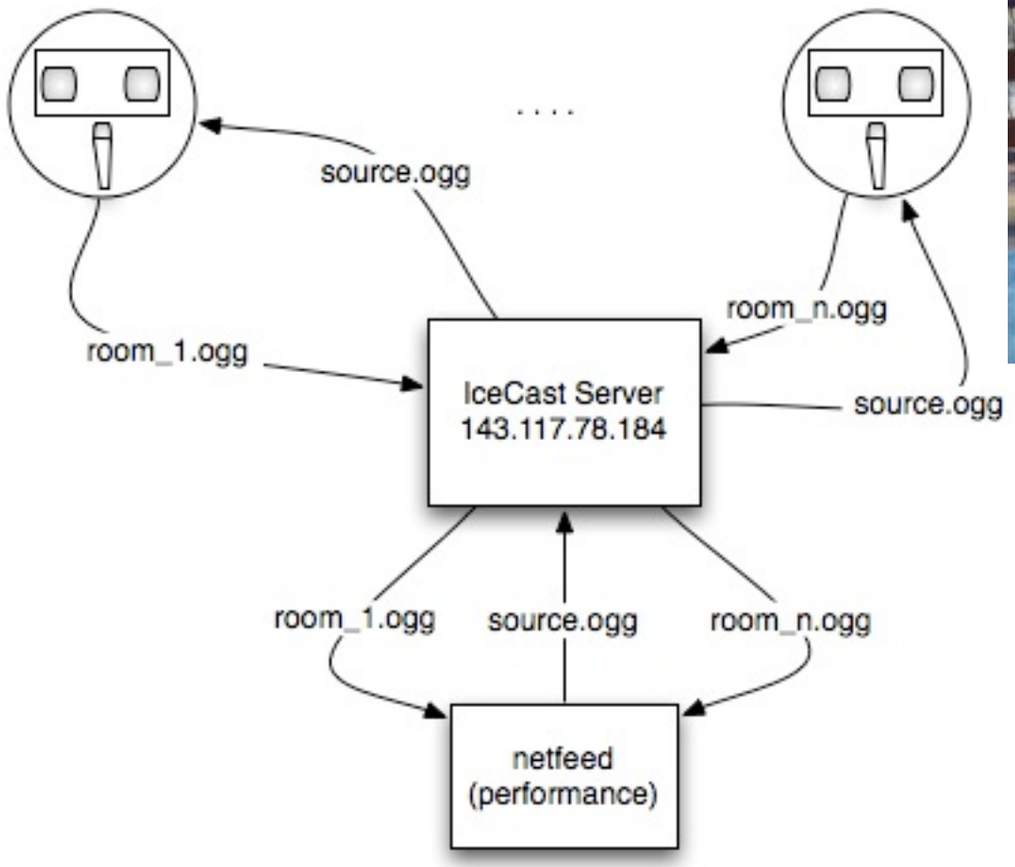
b) Spatialization example

Juan-Pablo Cáceres | CCRMA | Stanford University | jcaceres@ccrma.stanford.edu

Net vs. Net - Drony Feeds Back

Juan-Pablo Cáceres | CCRMA | Stanford University | jcaceres@ccrma.stanford.edu

NetRooms The Long Feedback netrooms.wordpress.com



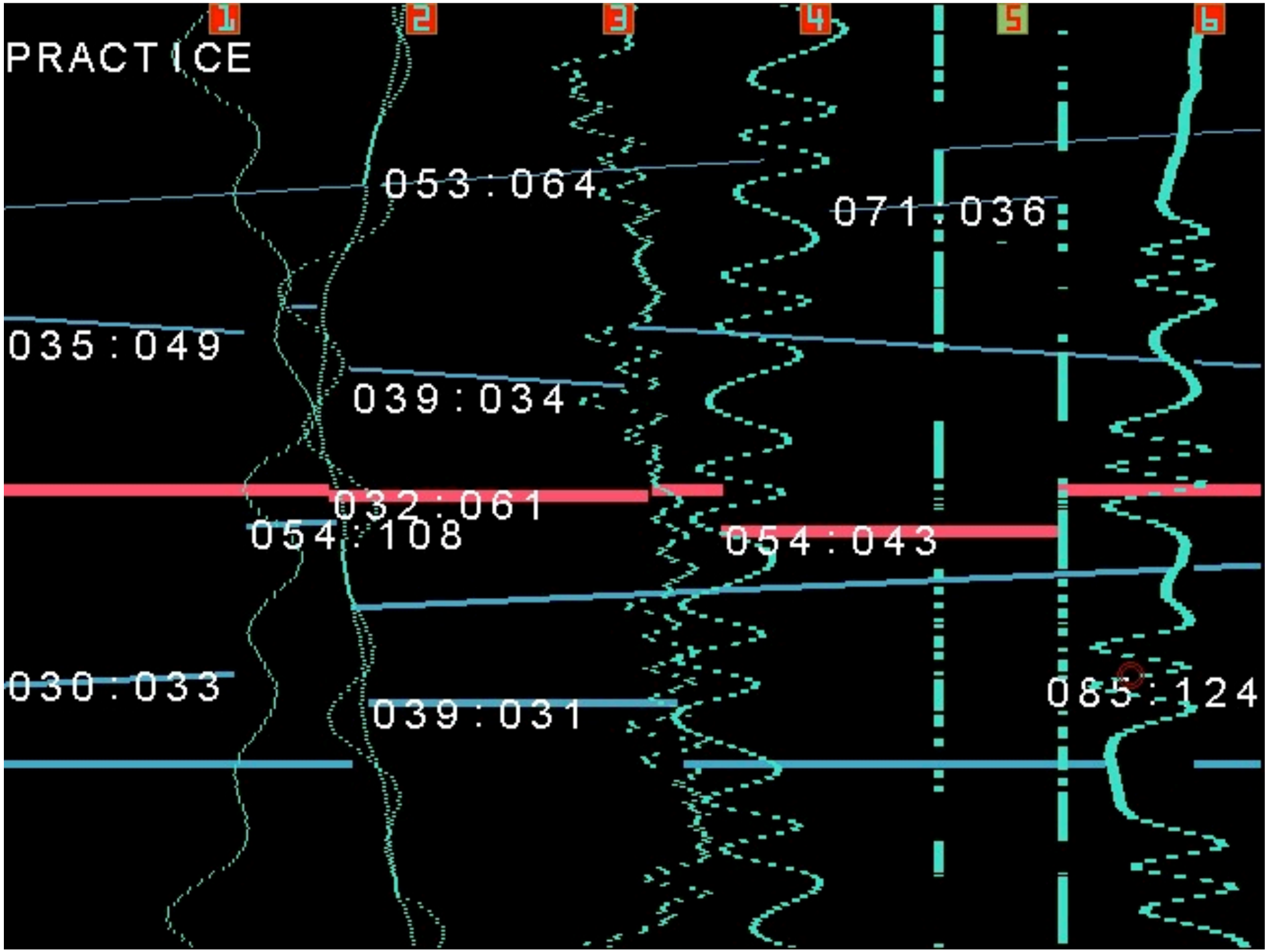
IO Matrix with amplitude control and channel filtering

Pedro Rebelo

Juan-Pablo Cáceres | CCRMA | Stanford University | jcaceres@ccrma.stanford.edu

Collaborative Environments

Juan-Pablo Cáceres | CCRMA | Stanford University | jcaceres@ccrma.stanford.edu

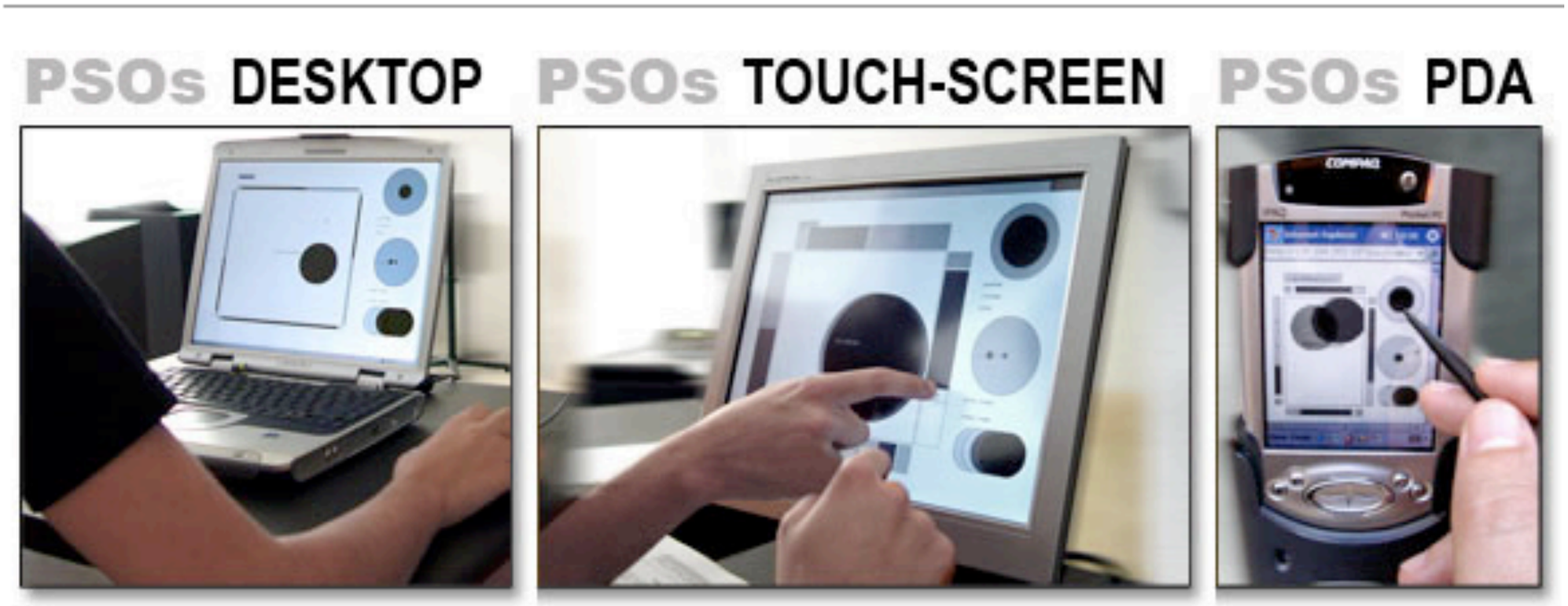


Sergi Jorda's FAUST

Juan-Pablo Cáceres | CCRMA | Stanford University | jcaceres@ccrma.stanford.edu

Jorda's REACTABLE

Juan-Pablo Cáceres | CCRMA | Stanford University | jcaceres@ccrma.stanford.edu



Barbosa's PSO

Juan-Pablo Cáceres | CCRMA | Stanford University | jcaceres@ccrma.stanford.edu

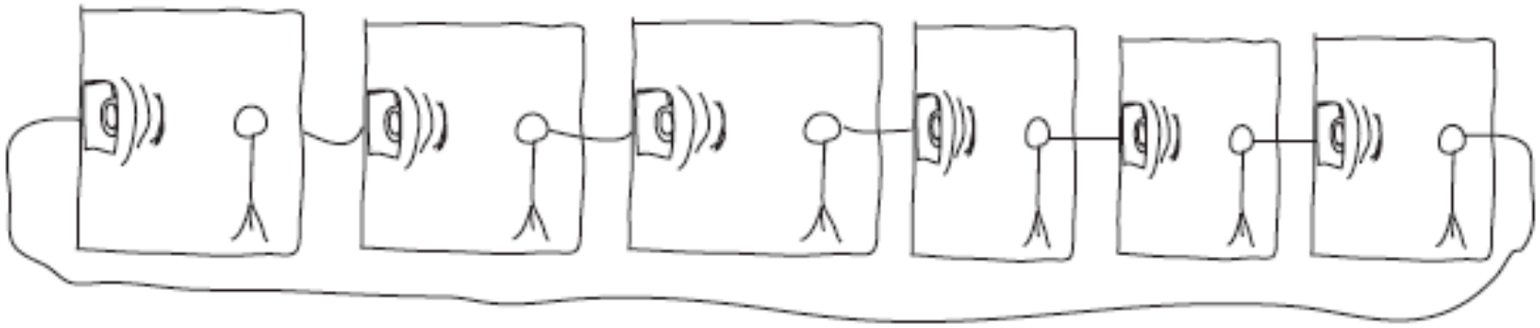
Art Installations

Juan-Pablo Cáceres | CCRMA | Stanford University | jcaceres@ccrma.stanford.edu

Chris Chafe & Greg Niemeyer - Ping

Juan-Pablo Cáceres | CCRMA | Stanford University | jcaceres@ccrma.stanford.edu

‘world without borders’ - audio tunnel round the world



SUHJUNG, SEOUL

SHINJUKU, TOKYO

STANFORD, PALO ALTO

PONTY, JOHANNESBURG

SOLITUDE, STUTTGART

Cobi van Tonder - The Audio Tunnel

Juan-Pablo Cáceres | CCRMA | Stanford University | jcaceres@ccrma.stanford.edu

The Meta-Stage of the Future

Juan-Pablo Cáceres | CCRMA | Stanford University | jcaceres@ccrma.stanford.edu

www.theworldopera.org

The World Opera

About us - Contact us

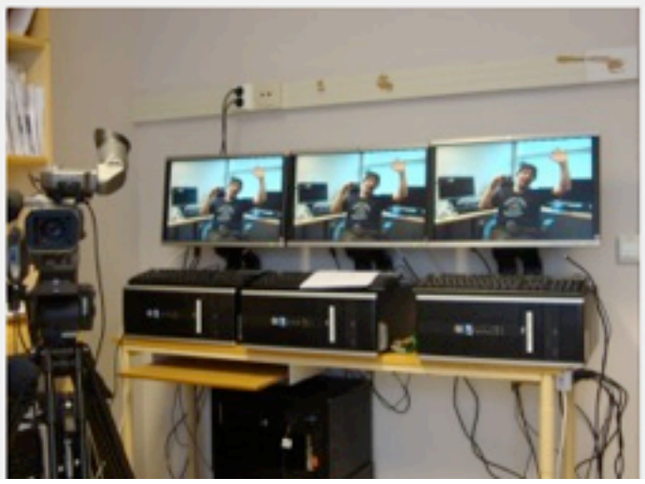
- About the WOP
- Projects
- Discussions
  - World Opera Symposium May 8-10, 2008
  - 2nd World Opera Symposium May 11-13, 2009

Opera embraces almost all kinds of Arts and involve all kinds of artistic people. Throughout its more than 400 years old history, the Art of Opera has been developed through experiments and turned into many different traditions through time and space around the world

April World Opera Tests

Tuesday, June 15, 2010 - 08:44

The World Opera, in association with our institutional, academic, government, and private partners, have just completed a three-month series of test implementing current and cutting-edge technologies for the distributed, interactive performance of operatic works in real-time across high-speed, high-performance audio/video networks. These tests occurred in at the Music Conservatory of the University of Tromsø during March, April, and May 2010.



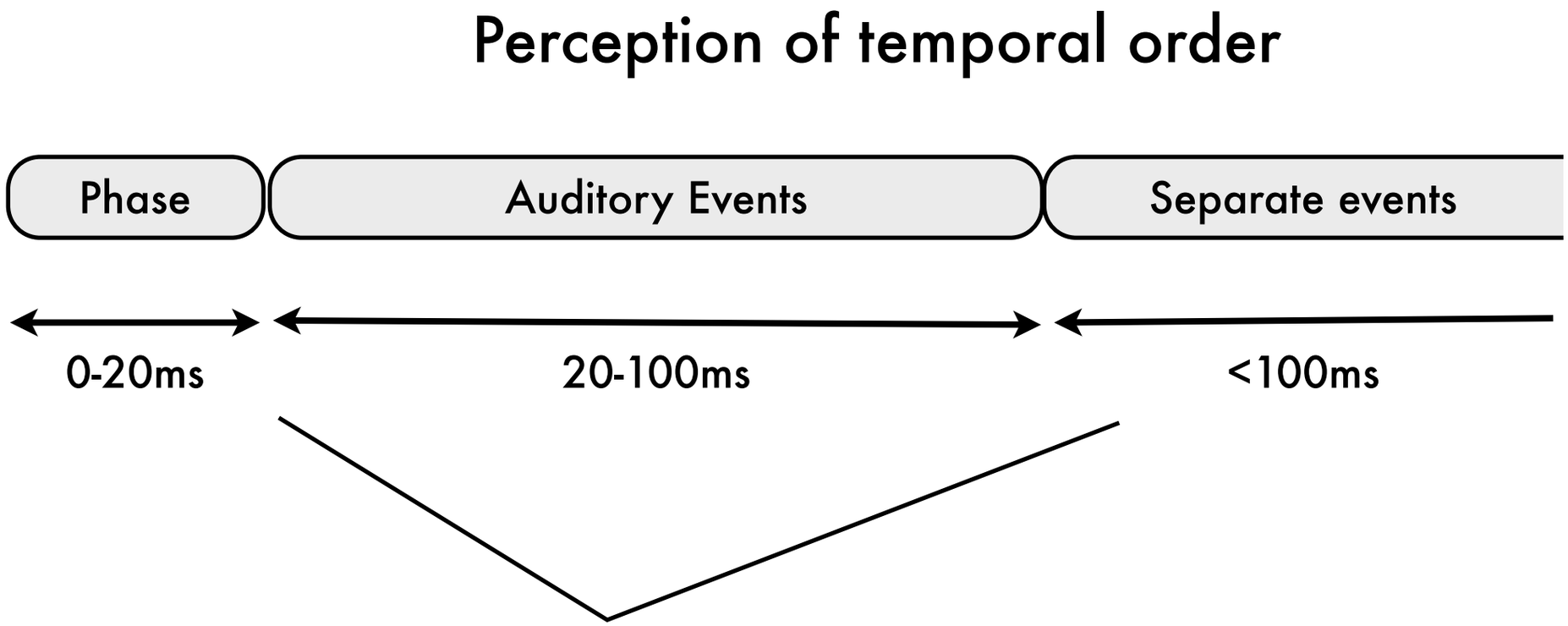
The April tests were caught off guard by the Eyjafjallajökull volcano in Iceland which prevented our partners from Simula contributing. We were hoping to work with Alex Eichorn and his students to implement his new two-way video portal and video server. Certainly we hope to revisit Alex's technology in the near future! Our tests were also limited by the availability of performing artists to participate. We were, however, happy to meet soprano Caroline Christensen who secured her vocal coach at the last minute, arranging an impromptu performance. Though the test was successful in that the network was eventually established (both audio and video), we again encountered problems across the network which appeared (again) to be port issues.

Juan-Pablo Cáceres | CCRMA | Stanford University | jcaceres@ccrma.stanford.edu

Ongoing Research - Prediction

Juan-Pablo Cáceres | CCRMA | Stanford University | jcaceres@ccrma.stanford.edu

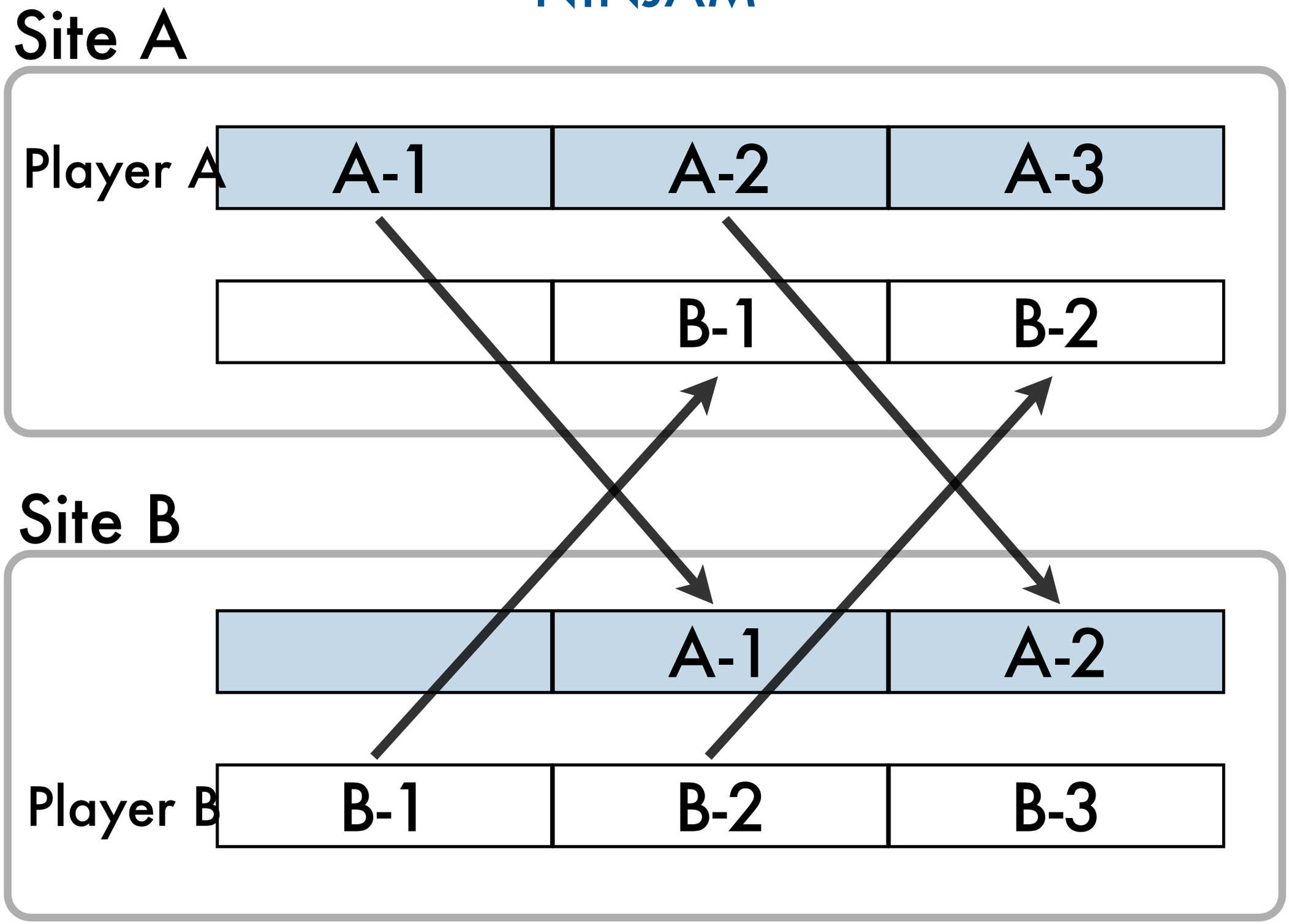
Delay and Synchronization



Range of interest

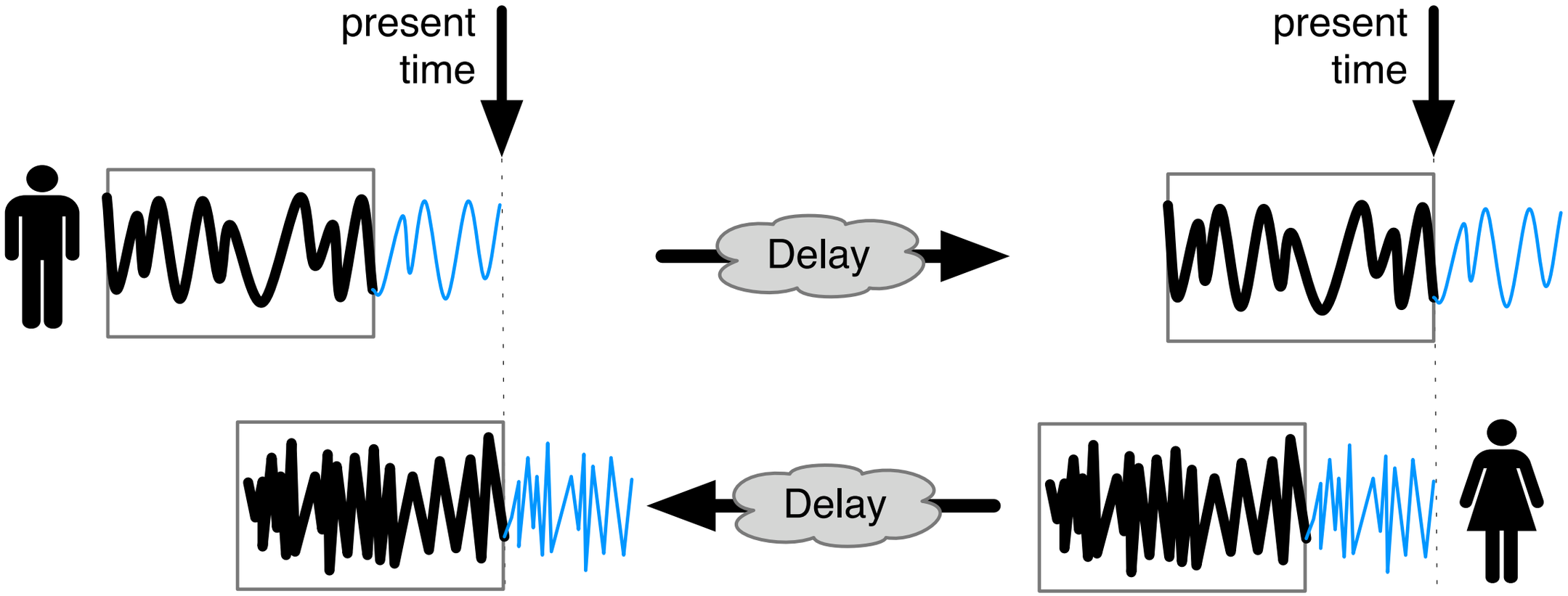
Juan-Pablo Cáceres | CCRMA | Stanford University | jcaceres@ccrma.stanford.edu

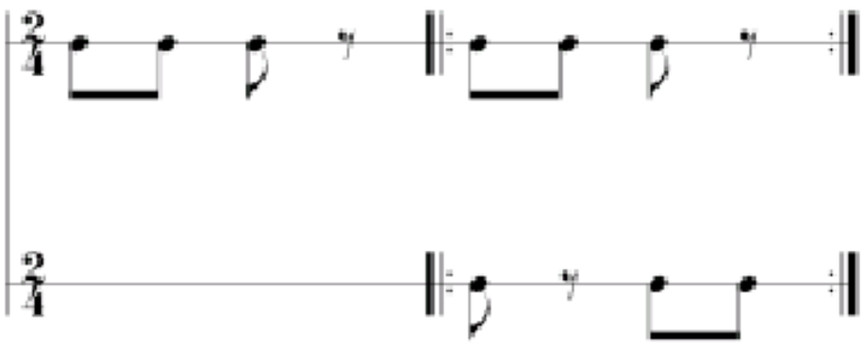
Sync Network Systems (one-phase delay)
NINJAM



Juan-Pablo Cáceres | CCRMA | Stanford University | jcaceres@ccrma.stanford.edu

The Problem with Latency

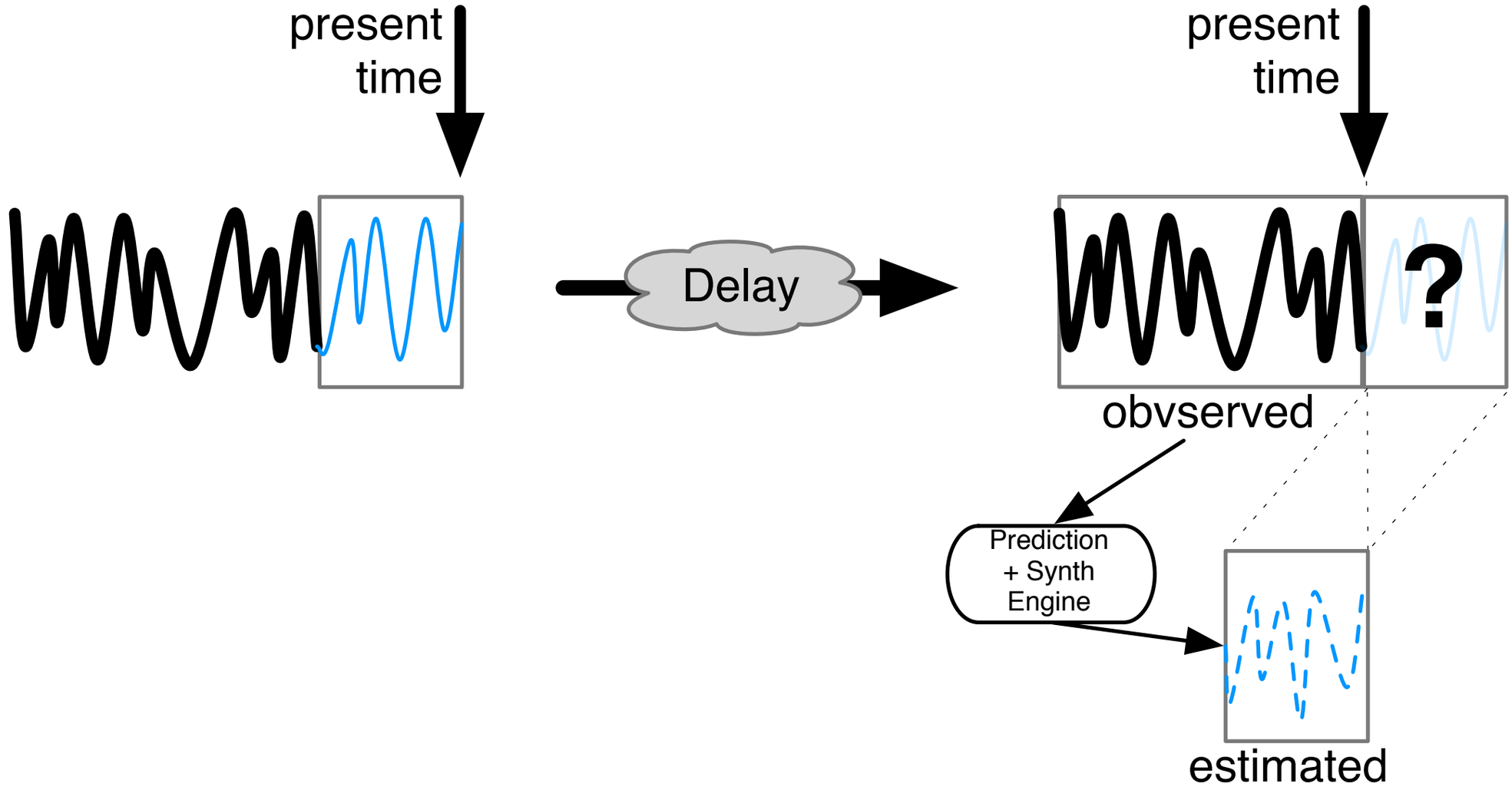




Ritardando

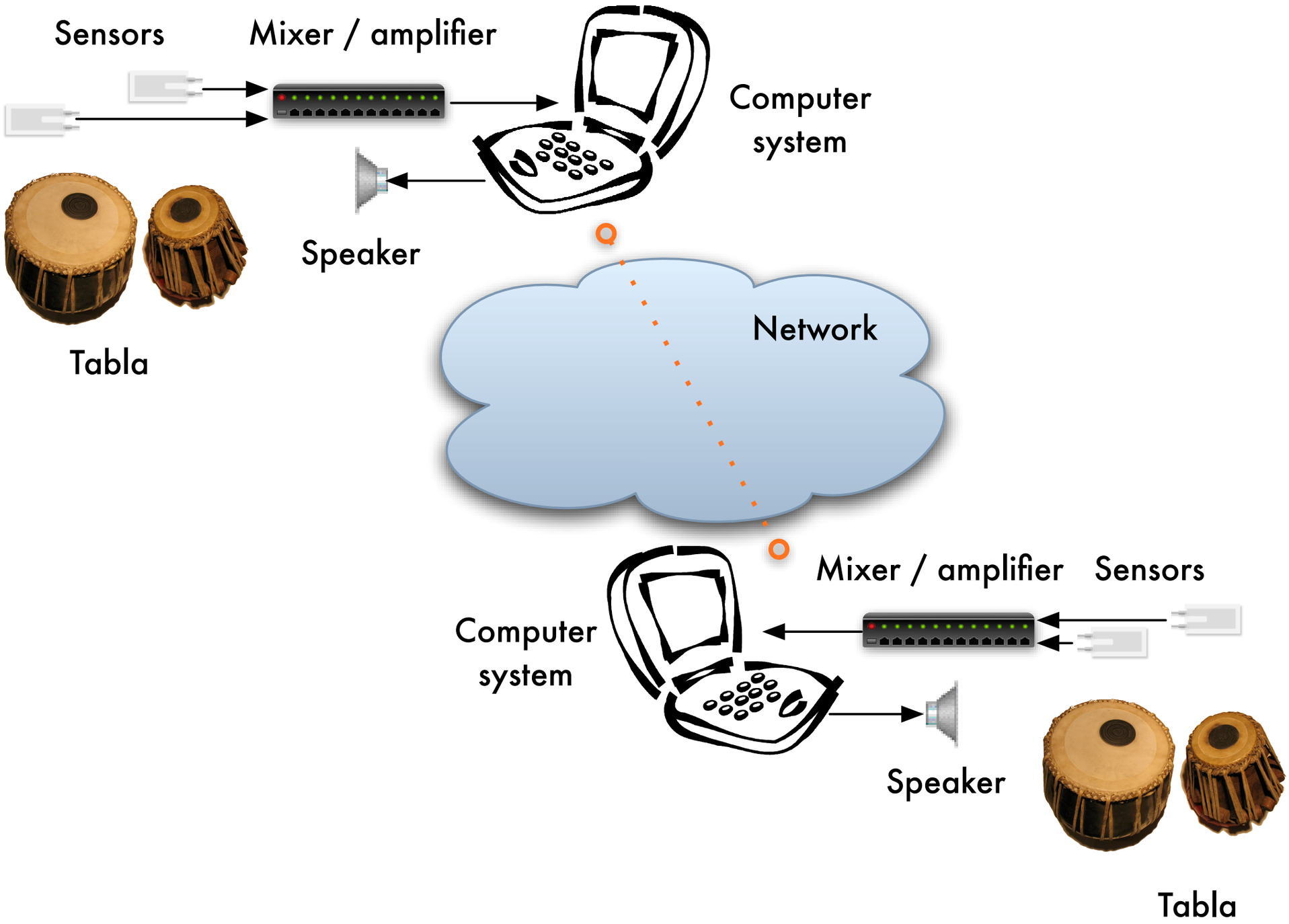
Juan-Pablo Cáceres | CCRMA | Stanford University | jcaceres@ccrma.stanford.edu

Ideal Prediction Scenario



TablaNet - Mihir Sarkar

Grammars



Juan-Pablo Cáceres | CCRMA | Stanford University | jcaceres@ccrma.stanford.edu

Commercial Promise?

http://www.youtube.com/watch?v=GusCPIQ4GF0&feature=related

Juan-Pablo Cáceres | CCRMA | Stanford University | jcaceres@ccrma.stanford.edu

Collaboration Environments
Ohm Studio - Future Collaborative Host Teaser

Juan-Pablo Cáceres | CCRMA | Stanford University | jcaceres@ccrma.stanford.edu