Karaoke Grid
- A mode of Entertainment Grid

Kazuyuki Shudo (AIST),
Ken-ichi Miyanomae (Waseda U.),
Koichi Iijima (XING, INC.),
Kazuhiro Omura (XING, INC.),
Yasuhiro Funahashi (XING, INC.),
Ryo Katsuma (Waseda U.),
Uske Kuwa (Waseda U.),
Tomo Sonoda (Utagoe, Ltd.),
Satoshi Sekiguchi (AIST),
Yoichi Muraoka (Waseda U.)
With this technology

We can just sing

on the Grid

In collaboration with our friends.
Karaoke Grid

Karaoke Grid is assembled technologies configured to produce virtual karaoke rooms on the Grid 😊

What has been achieved:

- Karaoke Grid node developed. It is an AG node equipped with a karaoke machine.
- RAT was modified so as to yield less audio latency.
  - RAT: the current audio tool of AG
  - But the modified version was not yet stable and not used.
- We planned and managed a distributed karaoke session as part of SC Global 2003.
  - Over 20 sites from 5 countries attended and we could have a very exciting session!
Karaoke Grid node

An AG node equipped with a karaoke machine.

PIG (Personal Interface to the Grid) based node

Delivery Grid node:
A portable and full-featured AG node

JOYSOUND over ACCESSGRID

National Institute of Advanced Industrial Science and Technology
Constellation Sites

Prepared sites
- U.S.
  - Phoenix SC Global Showcase node
- Japan
  - Warabi: an XING karaoke room
  - Waseda University

Not-prepared
- Over 20 singing sites from 5 countries, Australia, German, Japan, Thailand and US.

The Pacific Ocean
6,000 miles!

1 Gbps x 2
2.44 Gbps

(Area-Paciﬁc Advanced Network)
Tokyo XP

National Institute of Advanced Industrial Science and Technology
Organizations

A joint effort between

- XING, INC
  - A leading karaoke service provider.

- AIST
  - Japan’s largest research organization with 3,200 employees.

- Waseda University
  - One of largest university having 1,200 full-time staff and over 50,000 students.
Test and Demonstration

We had tests between US and Japan combined with demonstration.

AIST booth,
SC2003 Research Exhibits

Japanese sites:
A karaoke room at Warabi and Waseda University

Nice singing!
Test and Demonstration

The demonstration was open to everyone and they joined.

Singing audiences
Karaoke Grid Session

Date

- Started at 16:00 on Nov 20 (MST).
- 40 minutes.

Attending Sites

- SC Global room in Phoenix
  - about 200 seats?
  - 2 large screens (7.5' x 10' and 10' x 28'), many microphones and cameras.
- Over 20 sites from 5 countries attended the session over AG.
  - US, Japan, German, Thailand and Australia
- A large audience viewed the streaming.
  - ex. In Korea
  - Even my wife could see the session at her parents’ home.
Karaoke Grid Session

Contents
- A briefing by Shudo
- “Basket Case” (Green Day) by Akiyama (Osaka U.)
- “Help!” (The Beatles) by Teranishi (Penn State U.)
- “Livin’ On A Prayer” (Bon Jovi) by guys at Boston University
- “Let It Be” (The Beatles) by Shudo
- “We Are The World” (USA For Africa) by all

Singers were invited just in the session.

Miyanomae as the MC

Shudo giving the briefing
Livin' On A Prayer (Bon Jovi)

He got excited much.
Livin’ On A Prayer (Bon Jovi)

Pointing his finger at a camera
Livin’ On A Prayer (Bon Jovi)

Dancing
Livin' On A Prayer (Bon Jovi)

Singing altogether
Livin’ On A Prayer (Bon Jovi)

But still I’m the leading singer.
Livin' On A Prayer (Bon Jovi)

Shouting!
Livin’ On A Prayer (Bon Jovi)

“Thank you!”
Let It Be  (The Beatles)

I could also enjoy singing on Jennifer’s advice. Thanks.
We Are The World (USA For Africa)

- This song was proposed by Dr. Putchong, Kasetsart U., Thailand. This was a great idea.
- A guy at Winston-Salem State U. was leading this song while jumping. He should be recognized as the best singer.
XING, INC. and Waseda U. made announces.
Social Problems

Performance rights

- 50 songs were prepared first, but 22 songs for the real session.
  - Securing the rights takes work and time because we have to contact each right holder.
  - JASRAC is the only window in Japan. This is not always good but convenience in such a situation.

- An US company required us to pay over $2,000 !!!
  - This is an initial fee and additional fees needed in proportion to playing time.
  - When we tried to secure the rights to play video taken in SC Global in a commercial event (Oracle World Tokyo).
Karaoke Grid in future

CAFEnet
- AG-compatible software, but
  - with less latency, - 30 msec.
  - cf. several hundreds msec with RAT
  - with sophisticated and cool user interface.
- Developed by Utagoe, Ltd.
  - From scratch. But it uses RTP and RTCP and interoperable with AGTk (VIC and RAT).
- Already deployed at several cafes.
  - WIRED CAFÉ SHIBUYA, CAFE246, BOOK246, ...

Karaoke Grid on CAFEnet
- Less latency helps much.