

Access Grid "Showcase" 2004, Access Grid Retreat 2004
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Toronto, Canada

Karaoke Grid

- A mode of Entertainment Grid

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With this technology

We can just sing

on the Grid
In collaboration with our friends.

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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 !



Do you find yourself
in this picture?

AIST



Karaoke Grid node

- An AG node equipped with a karaoke machine.



PIG (Personal Interface to the Grid)
based node



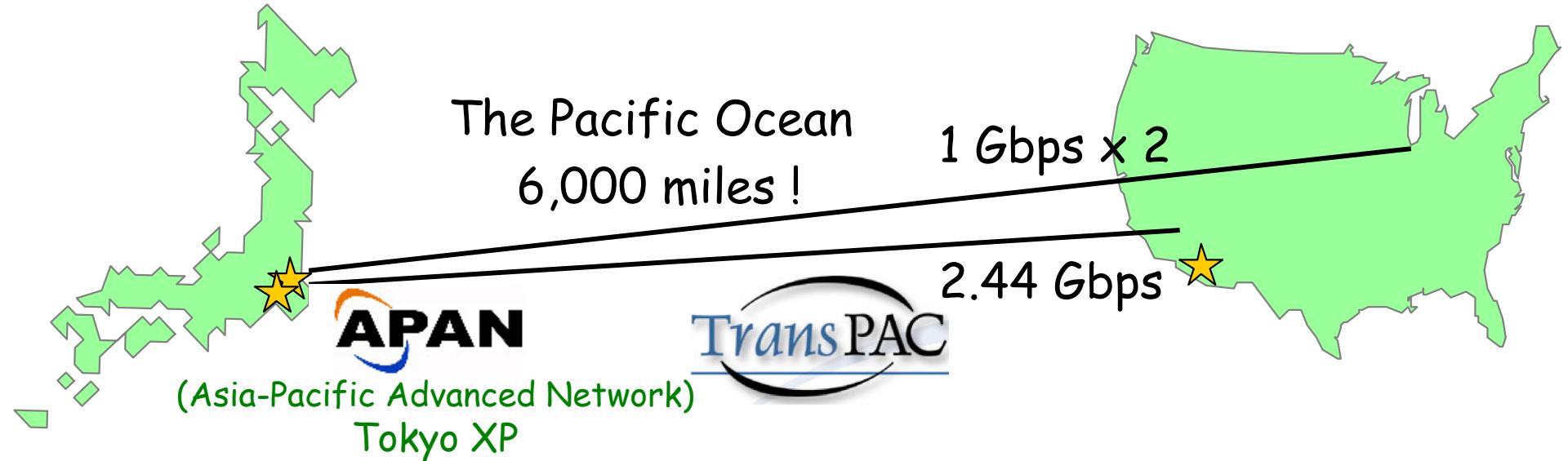
Delivery Grid node:
A portable and full-featured AG node

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National Institute of Advanced Industrial Science and Technology

XING.**AIST**

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.

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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

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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

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Livin' On A Prayer (Bon Jovi)

He got excited much.



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Livin' On A Prayer (Bon Jovi)

Pointing his finger at a camera



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Livin' On A Prayer (Bon Jovi)

Dancing



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Livin' On A Prayer (Bon Jovi)

Singing altogether



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Livin' On A Prayer (Bon Jovi)

But still I'm the leading singer.



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Livin' On A Prayer (Bon Jovi)

Shouting !



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Livin' On A Prayer (Bon Jovi)

"Thank you!"



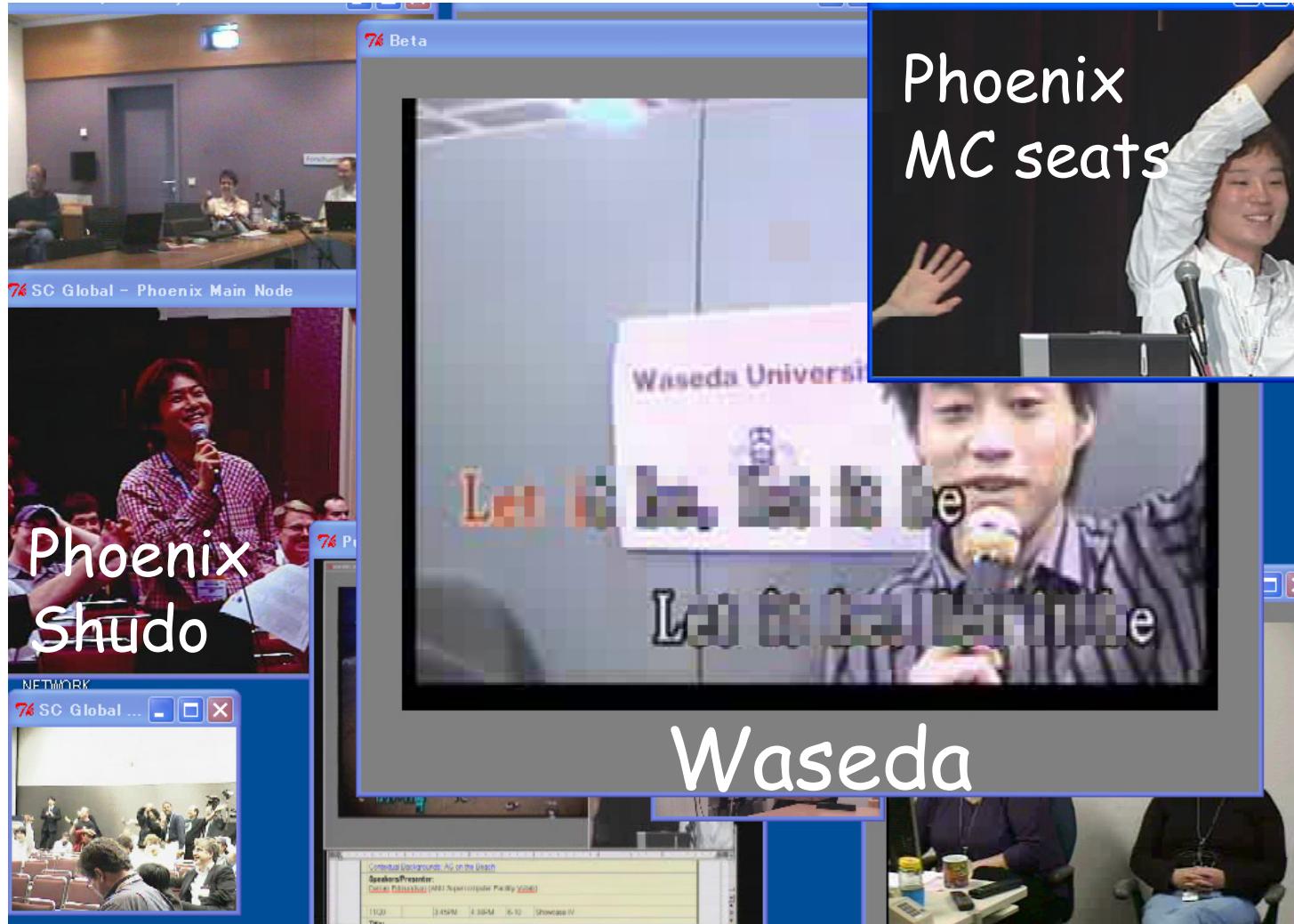
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Let It Be (The Beatles)

I could also enjoy singing on Jennifer's advice. Thanks.



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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.



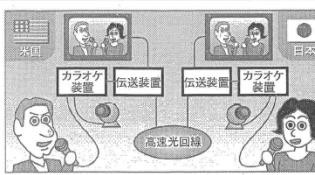
SC Global room



Newspaper Articles

- Kyodo News, Nov 19
- Nikkan Kogyo Shimbun, Nov 20
- Asahi Shimbun Nov 20
- Yomiuri Shimbun, Nov 20
- Chunichi Shimbun, Nov 20
- Nihon Keizai Shimbun, Nov 20
- Asahi Shimbun, Nov 26

XING, INC. and Waseda U. made announces.



海外と国内

カラオケ装置
伝送装置
カラオケ装置
高速回線

名古屋・エクシングなど共同開発

どこでもスパコン並み機能

代ネット利用技術 グリッド

トワーク
(秒)
10

ス
一データ群

15.11.20 読売新聞(15版)

20 日経(中部経済版)

日本でカラオケデュエット

海を越えひでヨーデュエットを。アーティストを。エクシングの子会社エクシング(名古屋市)は十九日、早稲田大学などを共同で最先端技術を使って日本で一緒にカラオケデュエットをして歌う実験に取り組むと発表した。

早大などと実験音・映像ズレ防ぐ

「カラオケ新システム」を、カラオケ歌手のエクシング(名古屋市)や早大の研究グループが共同で行うと19日、費用で設備ができる実験を発表した。世界中のひとと音や映像を楽しめ、隣同士でデュエットしていくように感じた」と発表した。

グリッド技術を使い、日本など5カ国間でカラオケ実演(米フェニックス市)で、実験を開始した。

15.11.20 中日新聞(12版)

太平洋越えデュエットへ

太平洋を越えてデュエット。インターネットとパソコンを一緒に歌うことができる最先端の通信技術を活用し、歌声や映像の劣化を防ぐ。日本で同時に音や映像を楽しめ、隣同士でデュエットしていくよ。

「時差なしかカラオケ実験へ」と発表した。日本が離れていても、お互いの環境で歌っていけるように、音や映像を楽しめ、隣同士でデュエットしていくよ。



カラオケ新システム

エクシングと早大共同開発

日本で出すお披露目

離れてても生で歌う

音と映像
時差最小に

音と映像
時差最小に

15.11.20 朝日新聞(名古屋本江)(14版) 11面

日本でカラオケデュエット

【名古屋】エクシング ユーティングの学会「SFC日本摩那瑞穂区、土岐 高広社長 052-182-8255・19020」は19日、早大、慶應技術総合研究所(産業技術研究所)と共同で、次世代通信インフラのグリッドコムユーティング(高速並列演算処理網)技術を活用する。技術は科学技術の分野で、成果を上げつつあるが、カラオケの好きなエンターテインメント分野で使うのは珍しいといふ。実験はスマー

技術応用サービス

カラオケサービス

エクシングあす実験

ド技研
テクノロジ

リカラオケサービス

15.11.20 日刊工業(14版) 10面

National Institute o

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).
 - © www.utagoe.com/en/cafenet.html
- ▶ Already deployed at several cafes.
 - © WIRED CAFÉ SHIBUYA, CAFE246, BOOK246, ...

● Karaoke Grid on CAFEnet

- ▶ Less latency helps much.

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