



Introduction to eIMBL

(electronic International Molecular Biology Laboratory)

and the application of AccessGrid





A-IMBN



- **Established in 1997 to promote development of molecular biology and biotechnology throughout the Asia-Pacific region**
- **Consists of 290 leading scientists from 16 participating economies* and 13 Supporting Institutes**
 - * Australia, China, Chinese Taipei, Hong Kong, India, Indonesia, Israel, Japan, Korea, Malaysia, New Zealand, Pakistan, the Philippines, Singapore, Thailand, Vietnam
- **Possesses a world-class International Advisory Board, and works in close consultation with EMBO, ICGEB**
- **Recognized as a priority APEC (Asia Pacific Economic Cooperation) initiative since 1998**
- **Funds come from private and government sources and the financial accounts are managed by a non-profit organization in SF**





What A-IMBN Does



- Sponsors annual conferences, training courses, fellowship programs, practical workshops throughout the region

1998 Seoul; 1999 Singapore; 2000 Brisbane; 2001 Taipei; 2002 Shanghai; 2003 Tokyo; 2004 Bangkok; 2005 Ho Chi Minh City; 2006 Kuala Lumpur

- Promotes R&D innovation and dissemination of knowledge in molecular biology and directly related areas of science and technology
- Planning, development and coordination of multi-center, multi-investigator collaborative research projects
- Fully committed to supporting eIMBL project in manpower and finance





eIMBL

Governing Council Members

Australia	John Mattick	Center for Mol. Cell. Biol., Brisbane
China	Zu-Xun Gong	Shanghai Inst. Biochem., Shanghai
Chinese Taipei	Jung-Yaw Lin	National Taiwan Univ., Taipei
Hong Kong	Nancy Ip	Hong Kong Univ. Science & Tech., HK
India	Obaid Siddiqi	Tata Inst. Fundamental Res., Bombay
Indonesia	Sangkot Marzuki	Eijkman Inst. Mol. Biol., Jakarta
Israel	Yoram Groner	Weizmann Inst. Sci., Rehovot
Japan	Yoshikazu Nakamura	Inst. Med. Sci., Univ. of Tokyo, Tokyo
Korea	Jeongbin Yim	Seoul National Univ., Seoul
Malaysia	Chong-Lek Koh	Univ. of Malaya, Kuala Lumpur
New Zealand	Warren Tate	Univ. Otago, Dunedin
Philippines	Filipinas Natividad	St. Luke's Med. Center, Quezon City
Singapore	Kong Peng Lam	Inst. Mol. Cell Biol., Univ. Singapore
Thailand	Jisnuson Svasti	Mahidol Univ., Bangkok
Vietnam	Hoa Xo	Biotech Center, Ho Chi Minh City



Definition of eIMBL

- A state-of-the-art web-based molecular biological laboratory network
- linking leading scientists, institutions, entrepreneurs investors and policy makers
- to capitalize on the knowledge and expertise base of participating laboratories
- across the Asia-Pacific region

Status

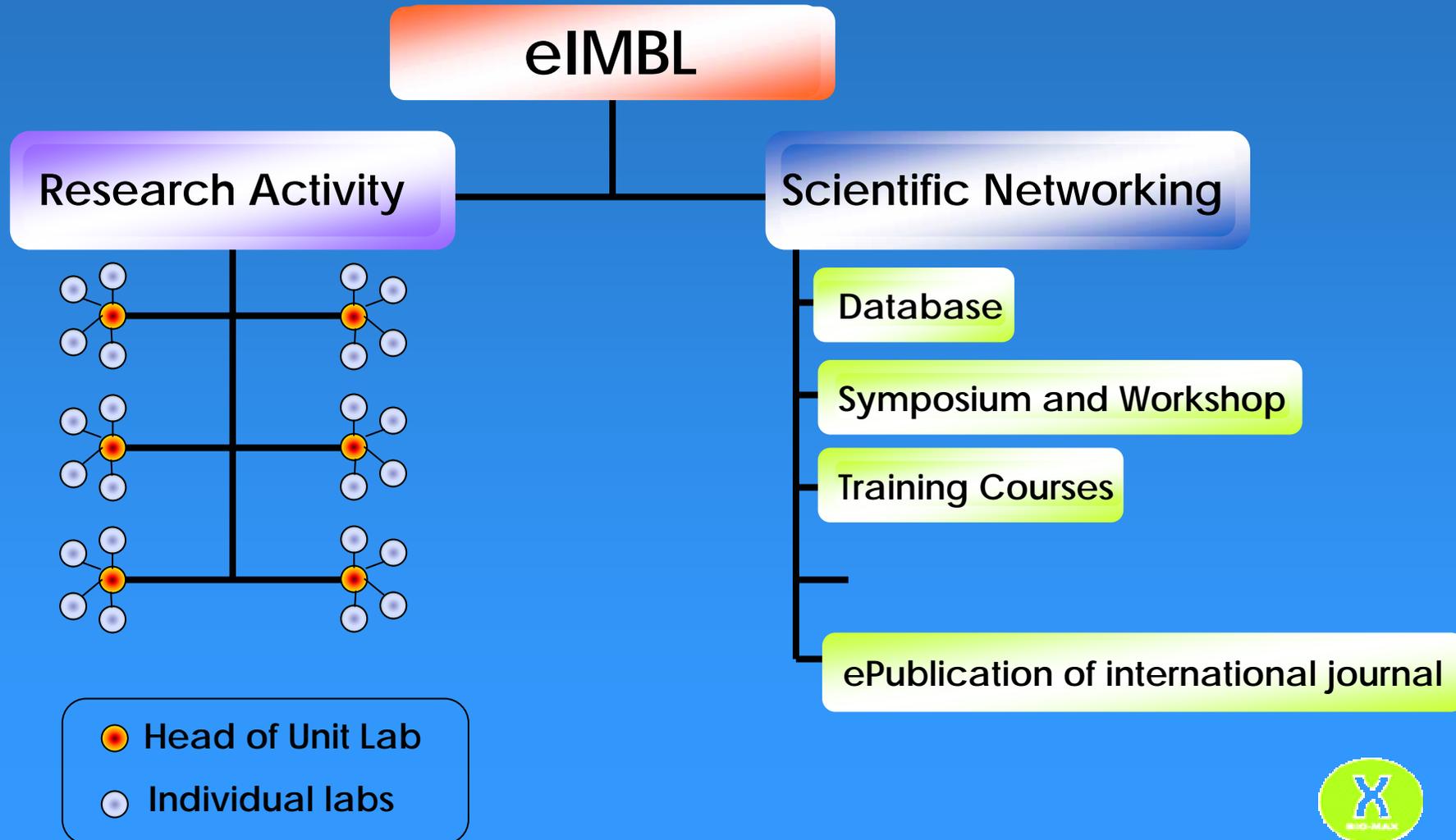
A unique International Virtual Laboratory Network

- International in status, non-political in management, staffing and operation
- Shall be organized exclusively for scientific, developmental and educational purposes
- Shall operate as a non-profit organization under the aegis of the Asia-Pacific International Molecular Biology Network (A-IMBN)



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Functions of eIMBL



KORSA, BIO-1912

Unit Laboratory: Key Functions

- Network individual labs of related research field and coordinate their research activities
- Provide scientific information/database through its official homepage, www.eimbl.org
- Organize symposium, workshop and training courses annually for participating laboratories

** Two Unit labs: **Systems Biology** and **DNA Replication** were established during the first year of operation



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Goals and Benefits of Unit Labs

- Share research equipment, materials, know-how, and laboratory personnel
- Conduct real-time peer discussion and analysis of experimental results among laboratories participating the “Unit Lab”
- Increase chances and opportunities of international research collaboration

Each eIMBL lab will benefit from the cost-effective, efficient nature of this new research environment to enhance scientific achievements



KOREA BIO-2012



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Systems Biology (Unit Lab)

■ Systems biology is an effort seeking system-level understanding of biological phenomena of varying orders such as molecules, cells, organs, individuals, or even eco-systems.

■ Participating Laboratories

- Head of the eIMBL-Systems Biology Laboratory

Dr. Do Han Kim (Gwangju Institute of Science and Technology, Korea)

- Core members

Dr. Kwang-Hyun Cho (Seoul National University, Korea)

Dr. Sang Yup Lee (Korea Advanced Institute of Science and Technology, Korea)

Dr. Young Sook Yoo (Korea Institute of Science and Technology, Korea)

Dr. Shui-Tein Chen (Academia Sinica, Taiwan)

Dr. Eytan Domany (Weizmann Institute of Science, Israel)

Dr. Upinder S. Bhalla (The National Centre for Biological Sciences, India)

Dr. Masaru Tomita (Keio University, Japan)

Dr. Peter J. Hunter (The University of Auckland, New Zealand)

Dr. Gang Pei (Shanghai Institute for Biological Sciences, China)

Dr. Gianhua Liu (Genome Institute of Singapore, Singapore)

Dr. Siegfried Neumann (Merck, Darmstadt, Germany)





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DNA Replication (Unit Lab)

- DNA replication is initiated at a region on a chromosome called the origin of replication. The question how replication origins are organized to replicate the complex genome of eukaryotes is of general interest.

- **Participating Laboratories**

- Head of the eIMBL-DNA Replication Laboratory

Dr. Hisao Masai (Tokyo Metropolitan Inst. of Medical Science, Japan)

- Core member

Dr. Arturo Falaschi (ICGEB, Italy)

Dr. Tsutomu Katayama (Kyushu Univ., Japan)

Dr. Akira Shinohara (Osaka Univ., Japan)

Dr. Chun Liang (Hong Kong University of Science and Technology, Hong Kong)

Dr. Yoshi Watanabe (Tokyo Univ., Japan)

Dr. Zuxun Gong (Inst. of Molecular and Cell Biology, China)

Dr. Deog Su Hwang (Seoul National Univ., Korea)

Dr. Yeonsoo Seo (KAIST, Korea)

Dr. Byrappa Venkatesh (Inst. of Molecular and Cell Biology, Singapore)

Dr. Jun Kyu Lee (Seoul National Univ., Korea)

Dr. Akio Sugino (Osaka Univ., Japan)



KOREA BIO-21



Research interface of eIMBL labs: www.eimbl.org

Navigation: LOG IN | HOME | SITEMAP | CONTACT US | FAQ

Header: eIMBL Electronic International Molecular Biology Laboratory

Main Navigation: About us | Research | Services | News & Events | Communication | Related organizations

Location: Location : > eIMBL

Welcome to eIMBL

My Cyber lab(s) [Dropdown]

MEMBER LOGIN | HELP

ID:

PW:

Sign In | Sign Up

Find Cyber lab by

Cyber Lab Name [Dropdown]

Find

eimbl.org/cyberlab/

go

On air
Real-time conferece

Central Research MORE

eIMBL DNA replication laboratory (eIMBL-DRL)

eIMBL systems biology laboratory (eIMBL-SBL) is a multi-national collaboration network that links systems biologists around the Asia-Pacific Rim

Announcement MORE

- Live broadcast: International Conference Strategic...
- Live Lecture Broadcasting - Nobel Laureate Robert ...
- CALL FOR GRANT APPLICATION (HUMAN FRONTIER SCIENCE...
- Opening Ceremony of The electronic International M...
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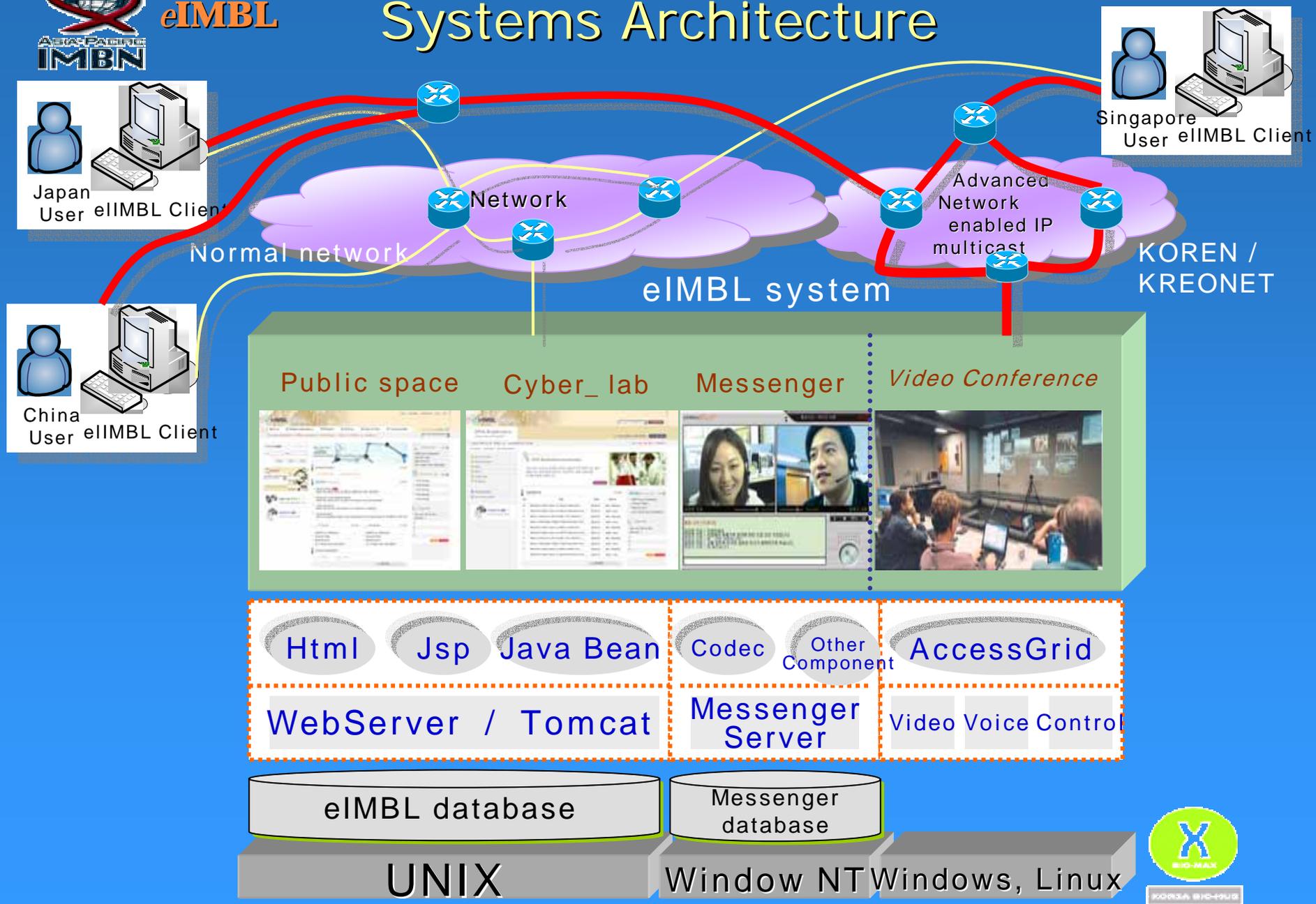
New Cyber Lab

- Comparative Genomics
- Protein Society
- Bioinformatics
- KSNP
- eIMBL Secretariat

hp menu | **User Manual for eIMBL**

Cyber Poll

Systems Architecture





eIMBL

Access Grid Equipment - 1 (Room type)



- Display machine
- Audio machine
- Video machine
- other equipments

- Projector x 3, camera x 4, Echo canceller x1, video control equipment x 1

- Network : KREONET





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Access Grid Equipment - 1 (portable type)

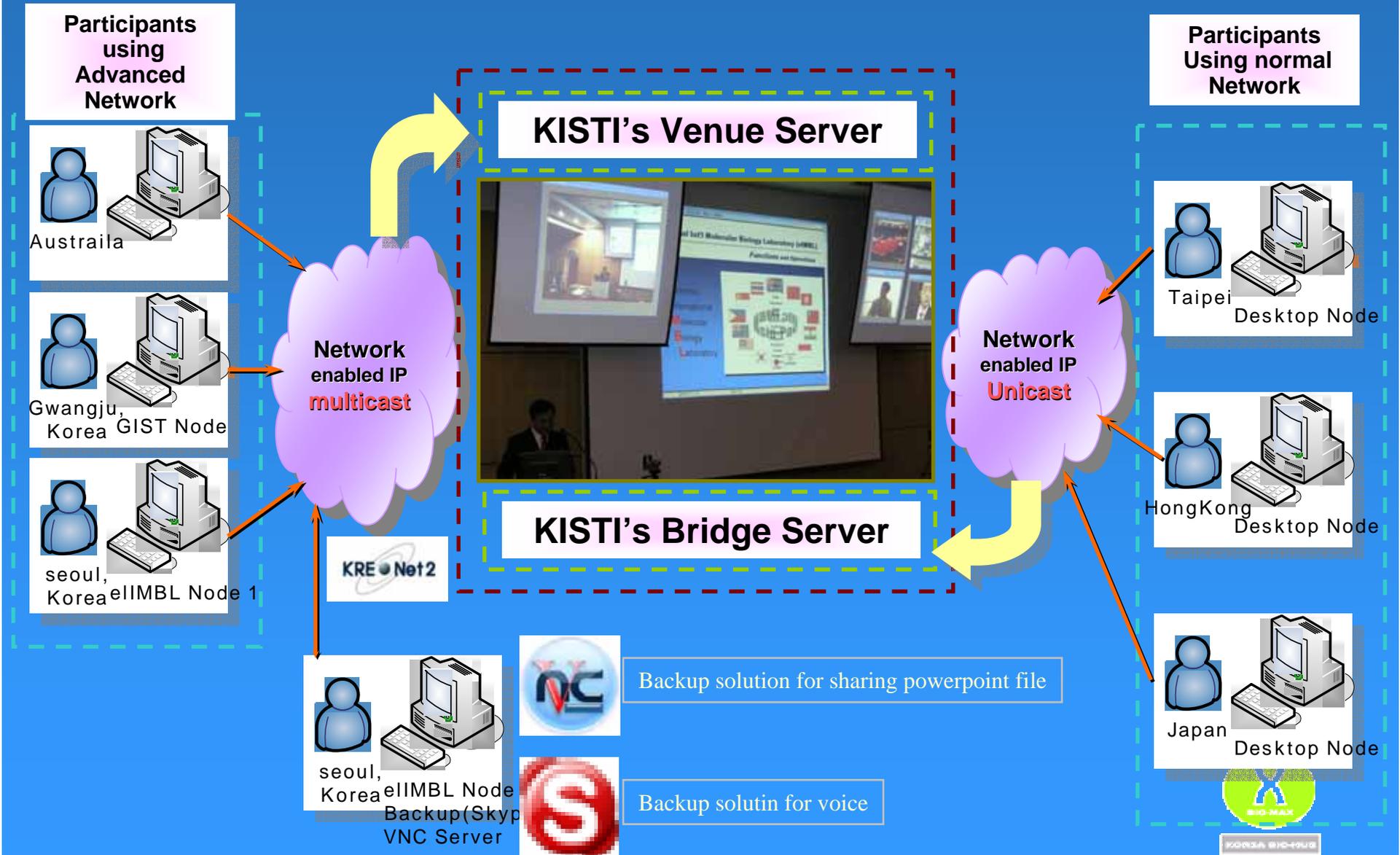


KOREA BIO-MAX



eIMBL

Structure of Video conference





AG Operation – 1

opening ceremony & symposium

- November 17, 2005
- Main Auditorium, International Vaccine Institute
- Program
 - Symposium One : Vision of eIMBL
 - Opening Ceremony
 - Symposium Two : eIMBL Outlook
- Participants
 - Japan, Hongkong, Australia, Taiwan, Korea(GIST)
- Video Conference using AG (Room type)
- Broadcasting Real-Time Video conference





eIMBL

AG Operation – 1

opening ceremony & symposium





AG Operation – 2

pandemic Influenza Preparedness and Response

- Friday 20 January, 2006
- 3rd Floor Conference Hall, International Vaccine Institute
- Participants
 - USA, Canada, Korea, Vietnam, Thailand, Singapore, China, Australia, Taipei, Philippines
- Video Conference using AG (Room type)
- Venue Server
 - <https://>





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AG Operation – 2

opening ceremony & symposium



KOREA, 2010-2012



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AG Operation – 3

63rd KSBMB Annual Meeting in 2006

May 25~26, 2006

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KORSA BIO-2006



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AG Operation – 4

2006 Asia Pacific Summer School on Computational Biology

- July 6~10th, 2006
- APCTP headquarter, POSTECH, Pohang, Korea
- Participants
 - Korea(seoul), Japan, Austraila, Koera(KISTI, Daejeon), Korea(GIST, Gwangju)
- Virtual Lectures using AG (Portable type)
- Venue Server
 - <https://vv2.accessgrid.or.kr:8000/>





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AG Operation – 4

2006 Asia Pacific Summer School on Computational Biology



KOREA BIO-MARK



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Technology Support

- 2006. 1. 27. “Workshop on Pan-Asian SNP Project” organized by KNIH
Japan, Singapore, Taiwan, India, Korea
- 2006. 2. 16.~22. Live broadcast of the lecture series “Basic Principles and Application of Protein X-ray Crystallography”; by Dr. Robert Huber
- 2006. 3. 20. “International Conference on Strategic Alliance for Life Science in Asia Pacific Rim” Live Broadcast
- 2006. 10. 22~27 9th World Congress of NUCLEAR MEDICINE AND BIOLOGY

Supporting Institute :

Seoul National Universtiy Hospital,
National Genome Research Institute KNIH,
Ministry of Health & welfare, etc.





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Conclusion

(Ugent Problems to be solved
through AG conference)

- Audio/Video communication problem due to unicast/low bandwidth
- Audience distraction by the delay in shared ppt presentation
- Presenter cannot handle ppt files by themselves
- Neither laser-pointer nor presenter-audience interaction



KOREA, BIO-2002