APSITT'99
Technical Program

Monday, August 30

Opening Session (9:00 - 12:00, Main Hall(CSTI))

Chair: Yuji Inoue, NTT Data, Japan

Opening Address
H. E. N. Bagabandi, President of Mongolia, Mongolia

Welcome Speech
D. Badarch, President, MTU, Mongolia

Message from IEEE Communications Society
Tetsuya Miki, Vice President, IEEE Communications Society, Japan

Keynote Speech
"A Mongolian Vision Towards the Development of Information and Communication Technologies in the 21st Century"
B. Sukhbaatar, Vice President, MTU, Mongolia

Keynote Speech
"Global Information Sharing Business and Network Strategy"
Toshiharu Aoki, Senior Executive Vice President, NTT, Japan

Keynote Speech
"Multimedia Education in Malaysia"
Ghauth Jasmon, President, MMU, Malaysia

Session 1: Tutorial (13:30 - 15:30, Main Hall(CSTI))

Chair: Takafumi Saito, NTT, Japan

ITS Services and Communication networks in the Asia- Pacific Region
N. Yoshikai, T. Noda, N. Maeda, and Y. Seki (NTT, Japan)

Will Hypermedia Handle its Promises?
S. W. Lee, B. Vaillant, and L. Basso (MMU, Malaysia)

Mobile Satellite Communications -ICO Perspective-
Toshio MIZUNO (KDD, Japan)

Next generation software architecture, TINA
Hendrik Berndt (TINA-C, USA)

Session 2: Traffic Control & Management (13:30 - 15:30, Room No.1(CSTI))

Chair: Iwao Sasase, Keio University, Japan

Estimation of amount of information flow III
some areas of Mongolia.
    B. Sukhbaatar, E.Narantuya, and M.Batbold (MTU, Mongolia)

Convergence to the Optimal Solution by Successive Control of Virtual Path Bandwidth
    Daisuke Satoh and Shigeo Shioda (NTT, Japan)

Measurement and Analysis of Internet Traffic on an International Link
    Satoshi KATSUNO, Tohru ASAMI (KDD R&D Laboratories),
    Akira KATO (University of Tokyo, Japan), and Jun MURAI (Keio University, Japan)

Dynamic Bandwidth Allocation by the Use of Auction in Backbone Networks
    Eiji TAKAHASHI and Yoshiaki TANAKA (Waseda University, Japan)

Study on Profile-based Transmission of Prerecorded Video
    Takeshi HIRANO (Waseda University, Japan), Hidetoshi YOKOTA (KDD R&D
    Laboratories, Inc., Japan), Yoshiyori URANO,
    and Hideyoshi TOMINAGA (Waseda University, Japan)

A Study on Layered Transmission in Distributed Environment
    Ryoheita HATTORI and Kaoru SEZAKI(University of Tokyo, Japan)

Session 3: Network Issue (13:30 - 15:30, Room No.2(CSTI))

Chair: Kinji Mori, Tokyo Institute of Technology, Japan

INFORMATION HANDLING FUNCTIONS IN THE INTELLIGENT COMMUNICATION
SYSTEM
    B. Sukhbaatar (MTU, Mongolia)

Multicast Network Design by the Use of Heuristic Algorithms
    Shintaro SHIMIZU, Takumi MIYOSHI,
    and Yoshiaki TANAKA (TAO / Waseda University, Japan)

A Study on Multicast Network Topology Extension
    Takumi MIYOSHI, Yoshiaki TANAKA (TAO / Waseda University, Japan),
    and Kaoru SEZAKI (University of Tokyo, Japan)

Evaluation of Wide-Area Fibre Channel Networking System
    Ryohei Nakayama, Kazuhiro Sato, Masato Sasaki, and Yuuichi Naruse (NTT, Japan)

Description of Concatenation Process using Declarative Language
    Tadashi Ohta (Soka University, Japan)

VIDEOPHONE OVER POTS (VOP)
> *Hezerul Abdul Karim, Rosli Besar, and M. U. Siddiqi (MMU, Malaysia)*

Session 4: Policy & Planning 1 (16:00 - 18:20, Main Hall(CSTI))

> ***Chair: Tatsuro Takahashi, NTT, Japan***

NATIONAL INFORMATION AND COMMUNICATION TECHNOLOGY IN THE MONGOLIA
> *Odgerel Ulziikhutag (MTU, Monglia)*

DEVELOPMENT CONCEPT of MONGOLIAN TELECOMMUNICATION NETWORK
> *G. Tsogbadrakh, B. Baatarjab, B. Damdinsuren, S. Ganbaatar,*
> *D. Bolor, and J. Sergelen (MTU, Monglia)*

Information infrastructure in Mongolia
> *L. Bayarmagnai (CSTI, Mongolia)*

Advanced PHS-Fixed Wireless Access System
> *Masanobu Suzuki, Yoshihiko Shindo, and Noriyuki Nagamatsu (NTT, Japan)*

Evaluation of an Interactive Multimedia Communication System For Remote Education Using Asymmetric Satellite and Terrestrial Networks
> *Masahiro Taka, Hidetoshi Kimura, Masaaki Shinji, Mamoru Kawazoe*
> *(Tokai University, Japan),*
> *Noriyoshi Yamauchi, Fumio Inumaru, and Yuji Inoue (NTT, Japan)*

Optimized Sequential, Neural Network and Expert System Based IP-Packet Filtering
> *M. I. Buhari, Shahrin Sahib, V. Ganapathy, and M. A. Kashem (MMU, Malaysia)*

A Study on Integrated Payphone System in Telekom Malaysia
> *Ali Khatibi, T. J. Kamalanabhan, Mohd Ismail, Olivier, and Hishamuddin*
> *(MMU, Malaysia)*

Session 5: Multimedia Service & Application 1
(16:00 - 18:20, Room No.1(CSTI))

> ***Chair: Chuah Hean Teik, MMU, Malaysia***

Objective Quality Measure for Coded Speech in Noisy Channel
> *Nobuhiko Kitawaki, Mitsuko Shimizu,*
> *Futoshi Asano (University of Tsukuba, Japan), and Akira Takahashi (NTT Japan)*

ROLE OF SPEECH SYNTHESIS IN TELECOMMUNICATION AND INFORMATION SYSTEM
> *B. Damdinsuren, O. Bat-Enkh. Ch. Munkhnasan, and D .Erdenebat (MTU, Mongolia)*

Performance Comparison of Cell-based Echo Cancellation In Representative Cell Loss Recovery Techniques
Hairul Azhar b Abdul Rashid, Kenzo Takahashi, and M. Salim Beg (MMU, Malaysia)

LanPhony: CTI system over ATM networks
Takashi Hirose (NTT-EAST, Japan),
Masami Mabuchi, Yo Moriya, and Keiichi Koike (NTT-WEST, Japan)

An Education Support System for LOTOS in Recursive Processes
Byung-ho PARK, Eun-jae CHOI (Korea Military Academy, Korea),
Kaoru TAKAHASHI (Sendai National College of Technology, Japan),
and Norio SHIRATORI (Tohoku University, Japan)

A Distributed Constraint Solving System for Functional Logic Programming
Mircea Marin, Wolfgang Schreiner (Kepler University, Austria), and Tetsuo Ida (University of Tsukuba, Japan)

Text-Independent Writer Verification Using On-line Handwriting Information
Yasushi YAMAZAKI and Naohisa KOMATSU (Waseda University, Japan)

Session 6: IP & ATM 1 (16:00 - 18:20, Room No.2(CSTI))

Chair: Toshikane Oda, KDD R&D Laboratories, Japan

A Multicasting Algorithm Using Multiple MCSs in ATM Networks
T. Y. Byun and K. J. Han (Kyungpook National University, Korea)

A Comparison of Bursty-bit FEC Schemes for ATM networks
Kin-Yew WONG and Kenzo TAKAHASHI (MMU, Malaysia)

Scalable ATM cell shaping algorithm supporting multi-level priority
Toushi SAKAI, Yoshikazu ODA, and Muneyoshi SUZUKI (NTT, Japan)

A Method to Reduce the External Blocking in the Batcher Banyan Network with Cell Copy Preparation Stages
Tomonori TAKEDA, Shin'ichi TAKAGI (Waseda University),
Yoshiaki TANAKA, and Hideyoshi TOMINAGA (TAO / Waseda University)

Shared Concentration Output Queueing Switch for Multiple Priority Classes
Yoshiyuki Nishino and Iwao Sasase (Keio University, Japan)

A Large Scale Knockout Dilated Banyan Multicast ATM Switch for Priority Classes
Kenji Sakamoto, Satoshi Hiyama, Yoshiyuki Nishino, and Iwao Sasase (Keio University, Japan)

Proposal and Evaluation of a Native ATM-ABR Transport Protocol
Keisuke Ishibashi and Arata Koike (NTT, Japan)

Guest Speech Session (9:00 - 12:00, Main Hall(CSTI))

Chair: Yoshiaki Tanaka, Waseda University, Japan

Microelectronic Systems Design Perspectives for future Radio Communication Applications
> *M. Glesner, J. Becker, and L. Kabulepa,*
> *Darmstadt University of Technology,Germany*

Overview on the Recent Developments in Research of Mongolian Language and Speech Processing
> *B. Otgonbayar, MTU, Mongolia*

Digital Revolution Closing at Hand
> *Yutaka Matsushita, Keio University, Japan*

Global IP Network based on Asia-Pacific
> *Yoshikazu Ikeda, KDD, Japan*

Internet Evolution over Photonic Networks
> *Tomonori Aoyama, University of Tokyo, Japan*

Session 7: Policy & Planning 2 (13:30 - 15:30, Main Hall(CSTI))

Chair: Kou Miyake, NTT, Japan

Structure and Activities of the Asian Multimedia Forum (AMF)
> *Tomoko Sugino and Masahiko Tsuchiya (NTT Communicatinos, Japan)*

ATM Network Interworking & Management project in AMF
> *Hiromasa KAWAMURA, Yoshihiro TAKIGAWA (NTT Communicatinos, Japan),*
> *and Kou MIYAKE (NTT, Japan)*

Summary of Satellite Trial on Asian Multimedia Forum (AMF)
-the Asymmetrical Satellite Communications System-
> *Shinichi WATANABE, Hideki KOIKE, and Katsuhiko Kawazoe*
> *(NTT Communicatinos, Japan)*

VTOA Field Trial in the Asian Multimedia Forum
> *Takenori Okutani (NTT, Japan), Atsuko Okada (NTT-AT, Japan),*
> *Kou Miyake, Ken Hasegawa, and Takemi Nisase (NTT, Japan)*

Functional Specification for ATM Network Management in a Multi-Carrier Environment
> *Masakatsu Fujiwara and Yuzo Fujita (NTT, Japan)*

Session 8: Wireless & Mobile (13:30 - 15:30, Room No.1(CSTI))

Chair: B. Damidansuren, MTU, Mongolia

Feed-Forward Linearization of Power Amplifiers for Communication Systems
Joung-Sook Cho and Kyun-Hyon Tchah (Suwon Industrial College, Korea)

An Adaptive Parallel Grouping Algorithm for B-WLL MAC Protocol
Min-Su Kim, Tae-Young Byun, Sun-Woo Lee, Sung-Ho Hwang,
Ki-Jun Han (Kyungpook National University, Korea), and Sung-Jo Kim (ETRI, Korea)

Mobile-IP: Hierarchical Mobility Management
Wee Lum, Tan,   Hean Teik, Chuah,   and Mooi Choo, Chuah (MMU, Malaysia)

INFORMATION DELIVERY OPPORTUNITY IN THE RURAL AREAS
B. Zorigtbaatar and B.Sukhbaatar (MTU, Mongolia)

Value Added Services for Wireless Personal Mobile Communication System
Kok-leong Liew and Rabindra Nath Sen (MMU, Malaysia)

Teletraffic Analysis and Design of Mobile Systems Using Spatial Data
Keisuke Nakano, Masakazu Sengoku (Niigata University, Japan),
and Shoji Shinoda (Chuo University, Japan)

Session 9: Network Management (13:30 - 15:30, Room No.2(CSTI))

Chair: Le-Hai Nam, Tokyo Institute of Technology, Vietnam

Implementation Methodology for Customer Trouble Ticketing Interface
Tohru Nishimura, Kazuhiko Ohkubo, and Yasushi Yamanaka (NTT, Japan)

A Study on Cross-connect NE Operation Support System Architecture
Tatsuhiko YOSHIDA, Tatsuyuki KIMURA, and Yasushi HONMA (NTT, Japan)

A Method for Private Network Management Using Address Translations
Naonobu OKAZAKI, Yoshimasa BABA, Mi Rang PARK, Shoichiro SENO,
Ken-ichi NAKATA (Mitsubishi Electric Corporation),
and Tetsuo IDEGUCHI (Aichi Prefectural University, Japan)

Network Maps: Synthesis and Applications
Glenn Mansfield (Cyber Solutions Inc., Japan),
K. Jayanthi (Intelligent Software Solutions, India),
A. Ashir, and N. Shiratori (Tohoku University, Japan)

TINA-Based Practical Model for Realizing Personal Mobility Service
Y. KOGA, S. MIYAMOTO, H. SHIGENO, and Y. MATSUSHITA
(Keio University, Japan)

Session 10: IP & ATM 2 (16:00 - 18:20, Main Hall(CSTI))

Chair: Lee Poh Aun, MMU, Malaysia

Evaluation of Compulsory Miss Ratio for Address Cache and Replacement Policies for Restoring Packet Reachability
Masaki Aida, Michiyo Matsuda, and Noriyuki Takahashi (NTT Advanced Technology Corp., Japan)

Efficient Repeat Delivery of Push Content using Layered Multicast and its Application to a News Distribution System
Shingo Kinoshita, Takahiko Nagata, and Teruji Shiroshita (NTT, Japan)

Commercial Service to Dial-up Users and True Push News Delivery System using Reliable Multicast
T. Nagata, S. Kinoshita, and T. Shiroshita (NTT, Japan)

TCP performance monitoring based on application-level logging
Hirohisa Taniguchi, Yasuyoshi Okada, and Junichi Sumimoto (NTT, Japan)

Mapping Method of IP Network Performance Metrics to Management Objects
Katsunori Ori and Hideki Nojiri (NTT, Japan)

ATM over IP: A Design and Principles
Tohru ASAMI (KDD R&D Laboratories, Inc., Japan), Yasuyuki YAMAZAKI (KDD, Japan), Akira KATO, and Masaya Nakayama (University of Tokyo, Japan)

A method of controlling voice-over-IP by Advanced Intelligent Network
Izumi Iwata, Yasuharu Yamashita, and Ryo Takeuchi (NTT, Japan)

Session 11: Multimedia Service & Application 2 (16:00 - 18:20, Room No.1(CSTI))

Chair: A. Erdenbataar, MTU, Mongolia

S-expression as a general protocol to offer a service on internet
Daisuke Nagano, Sachio Hirokawa, and Hideto Sazuka (Kyushu University, Japan)

Net-X: Contents-Mediation System with Information-Organizing Technology
Noriaki SAITO, Tetsuo HIDAKA, Takahiro ABE, and Yoshiaki SEKI (NTT, Japan)

Collaboration-oriented Scenario Markup Language: CSML
Keisuke HATA, Takashi NAITO, and Shuichiro YAMAMOTO (NTT, Japan)

Evaluation of Remote Authentication System using Fingerprint
Yoshimasa BABA, Hiroshi NAKAMURA, Teruko FUJII,
Tetsuo SADAKANE, and Naonobu OKAZAKI
(Mitsubishi Electric Corporation, Japan)

High-performance Communication Processing by the Data-driven Multi-processor System
>   *Shoichiro Seno (Mitsubishi Electric Corporation, Japan),*
>   *Tetsuo Ideguchi (Aichi Prefectural University, Japan),*
>   *Yuuji Koui, and Naonobu Okazaki (Mitsubishi Electric Corporation, Japan)*

Autonomous Fading and Navigation for Information Allocation and Search under Evolving Service System
>   *Kinji Mori (Tokyo Institute of Technology, Japan)*

Distribution and Communication in an Adaptive Agent Oriented Software Architecture Environment
>   *Guoqiang Zhong, Tarek Helmy, Babak Hodjat, and Makoto Amamiya*
>   *(Department of Intelligent Systems, Kyushu University)*

Session 12: Access & Optical System (16:00 - 18:20, Room No.2(CSTI))

Chair: Kenzo Takahashi, MMU, Malaysia

A new fairness control method for switched networks based on Ethernet
>   *Takuya TAKEDA, Arata KOIKE, Keisuke ISHIBASHI, and Kazuhiro SATO (NTT, Japan)*

Performance Evaluation of an Markovian LAN Model
>   *Lee Poh Aun and Pee Chih Yang (MMU, Malaysia)*

On downsizing of switching systems
>   *Takahiko Yamada (Ritsumeikan University, Japan)*

DSL Solutions and It's Applications
>   *Bolormaa Baljinnyam (Mongolia)*

The Optical Frequency Comb Generator as a Laser Source for DWDM
>   *EK Wong, SP Majumder, Faidz Ab. Rahman, LY Low,*
>   *Mohd. Ridzuan, and Marinah Othman (MMU, Malaysia)*

Innovation of advanced WDM technologies for future multimedia networks
>   *Katsumi Iwatsuki, Noboru Takachio, and Hitoshi Obara (NTT, Japan)*

A Feasibility Study on Optical A-D Conversion
>   *D. Damdinbayar, N. Kishi, and T. Miki*
>   *(The University of Electro-Communications, Japan)*