

Japanese Post-Peta Planning and (Pre) Feasibility Research

Yutaka Ishikawa, U. of Tokyo/RIKEN AICS

Hirofumi Tomita, RIKEN AICS

Masaaki Kondo, U. of Electro-Comm.

Naoya Maruyama, RIKEN AICS

IESP Kobe, 2012

2012/4/12

Strategic Direction/Development of HPC in JAPAN

Report on
Strategic Direction/Development of HPC
in JAPAN

MEXT

MEXT: Ministry of Education,
Culture, Sports, Science, and
Technology

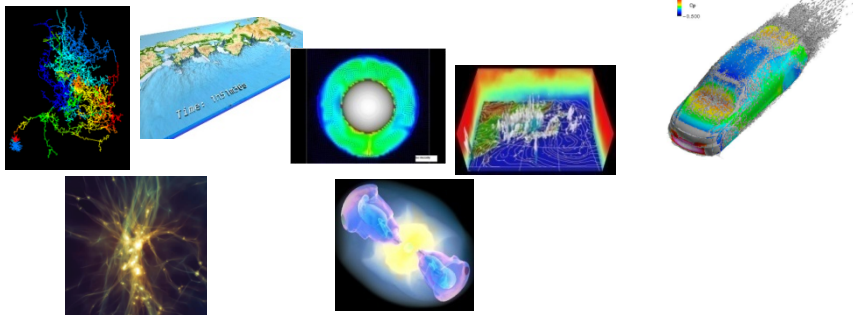
Council on HPCI Plan and
Promotion

今後のHPCI技術開発に関する報告書

SPRIRE
(Strategic
Programs for
Innovative
Research)

WG for Applications
Chairmen: Hirofumi Tomita (RIKEN AICS)
Junichiro Makino (TITECH)
Field 1: Life science/Drug manufacture
Field 2: New material/energy creation
Field 3: Global change prediction for disaster
prevention/mitigation
Field 4: *Mono-zukuri* (Manufacturing
technology)
Field 5: The origin of matters and the universe

WG for HPC Systems
Chairman: Yutaka Ishikawa (U. of Tokyo/RIKEN AICS)
Subleaders:
Naoya Maruyama (TITECH), Masaaki Kondo (Elec. ...)
Yasuo Ishii (NEC), Akihiro Nomura (TITECH), Hiyoyuki
Takizawa (Tohoku U.), Reiji Suda (U. of Tokyo), Takashiro
Katagiri (U. of Tokyo)
Advisers:
Satoshi Matsuoka (TITECH), Kei Hiraki (U. of Tokyo),
Hiroshi Nakamura (U. of Tokyo), Taisuke Boku (U. of
Tsukuba), Atsushi Hori (RIKEN AICS), Mitaro Namiki (...),
Shinji Sumimoto (Fujitsu), Hiroshi Nakashima (Kyoto U.)
Mitsuhisa Sato (Tsukuba U.), Akinori Yonezawa (RIKEN
AICS), Kengo Nakajima (U. of Tokyo), Ryutaro Himeno
(RIKEN), Satoshi Sekiguchi (AIST), Kimihiko Hirao
(RIKEN AICS), Akira Ukawa (U. of Tsukuba)



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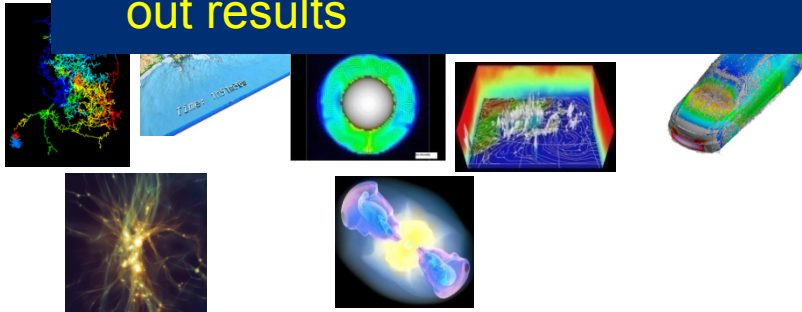
During summer to winter in 2011:
Three times joint meetings of WGs:
368 attendees in total

WG for Applications
Chairmen: Hirofumi Tomita (RIKEN AICS)
Junichiro Makino (TITECH)
Field 1: Life science/Drug manufacture

- Discussing science roadmap to challenge respective key socio-scientific problems in Japan by year 2020
- Demands for HPC systems to carry out results

WG for HPC Systems
Chairmen: Yutaka Ishikawa (U. of Tokyo/RIKEN AICS)
Subleaders:
Naoya Maruyama (TITECH), Masaaki Kondo (Elec. ...)

- Studying key technologies to build an HPC system by 2018 to achieve the science roadmap, whose constraints are 2000 m² space and 20 to 30 MW electricity
 - Architectures, operating systems, middleware, programming model and languages, math libraries



Rest of This Talk



- Applications: **Hirofumi Tomita**, RIKEN AICS
- Hardware: **Masaaki Kondo**, U. of Electro-Comm.
- Software: **Naoya Maruyama**, RIKEN AICS