

BRAIN BANK DATA MINING
ON THE
INTEGRAL UTILITY
SUPERCOMPUTING GRID

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BRAIN BANK DATA MINING
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SUPERCOMPUTING GRID

Advanced Harmonic Applications

Technology for Humanity

“The Integral Grid -- For Global Solutions”

BRAIN BANK DATA MINING
ON THE
INTEGRAL GRID

We Are Pioneers of:

*Advanced, “Integral”, SuperComputer-Driven
“Utility” Computing and Communications
Applications, Platforms & Integration Solutions for 21st
Century Society.*

We Deliver The Informational...

Interactive...

Intelligent...

INTEGRAL GRID = “INTEGRID™”

BRAIN BANK DATA MINING

ON THE

INTEGRAL GRID

- The current WorldWide Web/ Internet is nearing saturation for meeting the needs of high-volume/ high complexity/ high-security/ high-collaboration users;
- The “*INTEGRID*” is a necessity and an inevitability, as specialized Grid environments, from local, “enterprise” level, up to the Global sector-specific, and the ultimate Global *INTEGRID* are coming into Being;
- Data requirements, Collaboration, Processing Power, and TeleCommunications are all increasing at such a pace that “*Silo-System*” Architecture and Operations are no longer sufficient for the demands of Information Management.

BRAIN BANK DATA MINING

ON THE *INTEGRID*

- We are first in Human History to experience pervasive “Globalization” and accelerated Integration of cultures, media, economies, sciences, philosophies and systems.
- Because of multiple factors:
 - the worldwide Internet, social computing and online communities;
 - the worldwide wireless revolution;
 - the proliferation of international trade and governance agreements;
 - The global marketplace, now reaching the 4 Billion *Tier-IV* Earth inhabitants.
- ***GLOBALIZED INFORMATION = NEW WORLD'S BIGGEST MARKET !!!***

BRAIN BANK DATA MINING

ON THE *INTEGRID*

NEW IMPERATIVE:

GLOBALIZATION OF DATA

NEW REQUIREMENTS:

*(R)EVOLUTION IN ANALYTIC METHODOLOGY
OVERHAUL IN DATA REPORTING AND SHARING*

NEW SOLUTIONS:

*VIRTUALIZATION OF MASSIVE DATA STORES
IUGS™ + INTEGRAL AWARENESS MODELING (I-AM™)*

Collaborative R/D and App. Platform

* *AHA!* Integral Utility Grid Supercomputing™

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Applications: Distributed, Parallel and Collaborative Computing
+ *AHA!*

Collaboration OS

Collaborative Middleware
+ *AHA!*

Network OS

Intelligent IP Networking
+ *AHA!*

Engine OS

Single System Management
+ *AHA!*

System OS

Linux or Windows
+ *AHA!*

Hardware

Super Blade System
+ *AHA!*



INTEGRID™ Benefits

- Data routing, management, mining, and delivery of pervasive video, voice, and multimedia applications to all users conducted by one highly scaleable and flexible facility;
- One seamless Information Network Infrastructure integrating LAN/ WAN, intranet and internet, that is both centralized and distributed;
- Service-Oriented Architecture and Information Technology (*SOA* & *SO-IT*) can be made accessible to millions who do not have access now; the “Digital Divide” is bridged; Quality of Life is enhanced
- MASS MOBILIZATION FOR THE DIGITAL AGE!*

INTEGRID™ Challenges

- Dis-integrated health care solutions that neither talk to each other, nor integrate within a single, optimally efficient seamless health care ecology;
- Disparate Data sources that have highly variable quality of format/ completeness/ consistency/ maintenance of DataSets;
- Non-aligned paradigms/ systems for classifying wellness/ illness, balance/ imbalance, cause/ effect, etc;

INTEGRID™

Advantages over Traditional IT

- *GRID* is Future of *IT*, though most of it is available now for configuration and delivery;
- *GRID-Resident SOA & SO-IT* can be made accessible to millions who do not otherwise have resources to develop or acquire on their own;
- *GRID* accelerates “...Globalization, agility, efficiency, and delivery of new business value to end customers.” (Global Grid Forum)
- *GRID* is Highly-Disruptive technology: limited-use, over-capitalized, under-utilized, restrictive-licensing, silo-based systems must adapt or face declining market shares;
- *GRID* can accommodate Open-source + restrictive, proprietary platforms *via* seamless integration technologies and applications...

INTEGRID™

Advantages over Traditional IT for Research

Virtualized Layers:

- = less local investment in IT Overhead and Infrastructure;
- = More \$\$\$\$\$ available for Direct Research and Development;
- = More access to and Opportunity for Collaboration;
- = MUCH LARGER DataSets;
- = More Meta-Analytic “layers” to investigation;
- = Larger Peer Review Universe;
- = Greater Dissemination of Findings;
- = More Inter-Disciplinary, *Integrative* Research and Analysis;
- = Etc.....

INTEGRID™

Advantages over Other Grids

- *Utility Model*: Users pay only for *ACTUAL USE*, without bearing costs of Grid/ Network construction and maintenance (similar to Electrical Utility Grid);
- User savings allow more direct investment in Primary Business Operations, R&D, Customer Service, Innovation, etc.;
- Complete *Virtualization* to end-user, with combined centralized/distributed topology of *INTEGRID™* via scalable, secure, high-efficiency SuperComputing nodes;
- Enterprise-level Grids scalable and linkable to National/International and Sector-wide *INTEGRID*;
- *Proprietary Environment*: Those who build it, can Own and Operate it, and Grow it for intended needs...\$\$\$\$\$

INTEGRID™

Advantages over Other Grids

- *Integral Awareness Modeling (I-AM™) Methodology: AHA! + TBRI Core IP approach builds in additional **Intelligence Layers** to *INTEGRID* environment, for continuous enhancement of Data Mining, QOS/QC, Collaboration, R&D, User Interface, etc.*
- *Custom-Build-to-Spec's via large-volume Enterprise ==> Sector ==> MultiSector approach;*
- *National interests of China and other countries better served through creating *INTEGRID™* => more Self-Determination of Data Streams within *INTEGRID* environment [Note: 90%+ of Global Internet traffic still passes through Nodal Points based in USA -- subject to monitoring, profiting, control...].*

INTEGRID™ Advantages

- The Digital Health Care Environment, while beset with numerous technical and data organization challenges, nonetheless is able to achieve great progress with converging disparate data bases across a common computing platform;
- This is especially true when *Integral Utility Grid SuperComputing* technology is applied;
- The *IUGS™* makes available MANY new (10^n) and far more useful ways of inter-relating and analysing data;
- Many new, combination approaches to Disease/ Imbalance, Treatment/ Cure/ Detoxification are possible;

PROPOSITIONS:

- If **\$\$\$** were unlimited...
 - -- *How would You proceed with Your Life?*

Therefore:

- If **DATA/ Information** were Unlimited...
 - -- *How would You proceed with Your Research???*

THIRD-BRAIN RESEARCH INSTITUTE

- Participate in Inter-national efforts of NeuroScience and NeuroInformatics Research;
- Extend constructs of “Brain Mapping” from NeuroAnatomic => Histologic => NeuroPhysiologic => BioEnergetic => Field;
- Integrate major Systems/ Traditions/ Disciplines regarding Science + Health + Human Condition;
- Modeling of Brain => Mind => Consciousness via *Integral Informatics for Practical Applications*;
- *Help Pioneer the FUTURE concept of a “Global Brain-Grid”...*

INTEGRAL AWARENESS MODELING:

I-AM™

- *INTEGRAL:*

- WHOLENESS
- HOLONOMIC

- *AWARENESS:*

- CONSCIOUSNESS
- INTELLIGENCE

- *MODELING:*

- ALGORITHMIC
- ADVANCED ARTIFICIAL INTELLIGENCE/ FUZZY LOGIC/ CHAOS/ COMPLEXITY/ HEURISTICS/ NON-LOCALITY/ QUANTUM/ COSMOLOGIC/ TEOLOGIC/ EMPIRICAL/ ETC.
- WITNESS/ SURVEILLANCE

METHODOLOGIES TO EVOLVE:

- ANALYTIC
- METRIC
- QUANTITATIVE
- QUALITATIVE
- DESCRIPTIVE
- ASSOCIATIVE
- EXTRAPOLATIVE
- ETC.

DATA MINING: CROSS-CURRENT APPLICATIONS

- PHARMACOLOGY
- BEHAVIOURAL SCIENCES
- ANTHROPOLOGY
- EDUCATION/ TRAINING
- SOCIOLOGY
- NATURAL MEDICINE
- ECONOMICS
- OTHER SCIENCES
- ETC.

*DATA MINING:
IUGS™ APPLICATIONS AND
INTELLIGENCE LAYERS*

1. ACTIVE/ DIRECT/ SPECIFIC/ INCIDENTAL
2. ACTIVE/ DIRECT/ GENERIC/ SITUATIONAL
3. BACKGROUND/ INDIRECT/ GENERIC/
GESTALTIST

*NOTE: #3) HAS FEED-BACK AND FEED-
FORWARD FUNCTION ON #1) AND #2.*

REDUCTION versus *EXPANSION*

Most Probabilistic/ Statistical and Western Scientific Models and Traditions are based in very limited,/ finite, usually discreet, localized, highly qualified, and tenuous Data.....

Therefore, *REDUCTIONISM has prevailed.*

Integral Intelligence Data Mining will lead to New Approaches to Data and Associations, Research Design, and Implementation.....

Therefore, *EXPANSIONISM will arise.*

*THE FUTURE IS
EXCITING !*

THANK YOU