Health Informatics Domain Knowledge Analysis: An Information Technology Perspective

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Human vs Computer
*(the interaction that was forgotten!)*

- Intuition
- Judgment
- Creativity

- Speed
- Accuracy
- Attention-to-details

Synergistic capability
{Cooperation}
The “iterative” intersections

Information Technology

Health Informatics

Health Care

Medical Informatics

Biomedical Engineering

Medical Science

Informatics

Science (x, y, z)

People; Processes, Procedures and Systems!
Service Oriented Building Blocks

- Patient centric
- Processes driven
- Procedural centric
- Application Development
- Service deliveries
- Decision making
- Databases
- Data (e.g., HER, MR)
- Advance Networking
- Security & Privacy
- Devices (Mobile, Ubiquitous)
- OS, OTHIS, HIS
Open and Trusted Health Information Systems (OTHIS)

OTHIS

HIAS

HIAC

HINS

isi Information Security Institute
Faculty of Science and Technology
Queensland University of Technology
OTTHIS Architecture Modules

Health Informatics Access Control (HIAC)
Health Informatics Application Security (HIAS)
Health Informatics Network Security (HINS)

Process centric
Information under processing

Data centric
Information at rest

Transfer centric
Information under transfer
Frontier of Health Informatics

- EHR Management
- Advance networking capabilities
- Clinical decision support (+ Management Support)
- DSS vs DW (and DBs)
- QoS and the Service Quality
- Point-of-Care Information Technology (POC-IT)
- Health care Information Technology (HCIT)
- OS vs OTHIS
- Ubiquitous Access and Devices
- Information Accountability —

  *the use of information should be transparent so it is possible to determine whether a particular use is appropriate under a given set of rules and that the system enables individuals and institutions to be held accountable for misuse*

  (Weitzner, et al., 2008).
Intellectual contributions

- Perception and understanding of the requirements
- Discipline boundaries (e.g., Health Care without boundaries)
- Education and Training
- Research and Development
- Investment on Knowledge
- Reward on Experiences and performances
- Incorrect tools (e.g., KPI, ROI, Business Models)
- Learning from the mistake (e.g., no repeat)
- Professional Practice (e.g., CPD, Job Training etc)
- .......
- ,......
The trend on HIS domain knowledge

- Efficient Decision Support Systems
- Research and Development in data and information accessibility
- Efficient Information Retrieval
- Policy development (e.g., health care solution)
- Synergies between key personals

<table>
<thead>
<tr>
<th>Databases</th>
<th>Networks</th>
<th>Policies</th>
</tr>
</thead>
<tbody>
<tr>
<td>HER applications</td>
<td>Advance networking</td>
<td>Security</td>
</tr>
<tr>
<td>Information Retrieval</td>
<td>Mobile Devices</td>
<td>Protocols</td>
</tr>
<tr>
<td>Database designs</td>
<td>Medical Devices</td>
<td>Forensics analysis</td>
</tr>
<tr>
<td>HER management</td>
<td>Ubiquitous Devices</td>
<td>Privacy policies</td>
</tr>
<tr>
<td>DSS and applications</td>
<td>OS</td>
<td>Health care solutions</td>
</tr>
<tr>
<td>Data Integration</td>
<td>OTHIS</td>
<td>Quality assurances</td>
</tr>
</tbody>
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Moving Forward

- **Must**
  - prepare for the change
  - see the changes
  - accept the changes
  - understand the culture of change!

- **Share**
  - ideas
  - experiences
  - innovations
  - no boundaries

- **Take**
  - responsibilities
  - precautions
  - no risk

“Perpetuating what we have is not going to get us where we want to go”
Discussions