Real-time information selection for command & control display via relational preference rules

In real-time command and control applications, decision makers are flooded with multiple data streams—images and sensor data—that comprise accessible and useful information such as maps, status reports, analyses, relevant statistics, and more. Such an information overload, which can significantly affect decision quality, calls for tools that help decision makers focus on the most relevant information. We present a powerful and flexible tool for building proactive display systems that continuously select from among active data streams and proactively retrieve relevant information from databases to help decision makers focus on the most relevant data sources. The technology is based on an intuitive specification language and optimization algorithms that can select data sources in real-time.

Goals and Benefits

- Context sensitive, automatic selection from among data streams
- Proactive retrieval of data from databases and proactive computation
- Faster response time and better decision quality
- Logic can be reused (e.g., emergency services in different cities)

Potential Commercial Uses and Market

- Emergency services
- Military applications
- Sophisticated adaptive GUI for gaming applications

Development Stage and Development Status Summary

- A basic prototype of the system (JAVA) has been developed.

Research Team

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Patent Status

Patent Pending

Before and After Display: When an enemy is detected (top right on top screen shot) the importance of its video screen increase and it moves to the main window (left, bottom).

Contact for Licensing Information

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