The Helpful Environment

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The creation and use of task-centric virtual organisations involving people, government and non-governmental organisations, automated systems, grid and web services working alongside intelligent robotic, vehicle, building and environmental systems to respond to very dynamic events on scales from local to global.
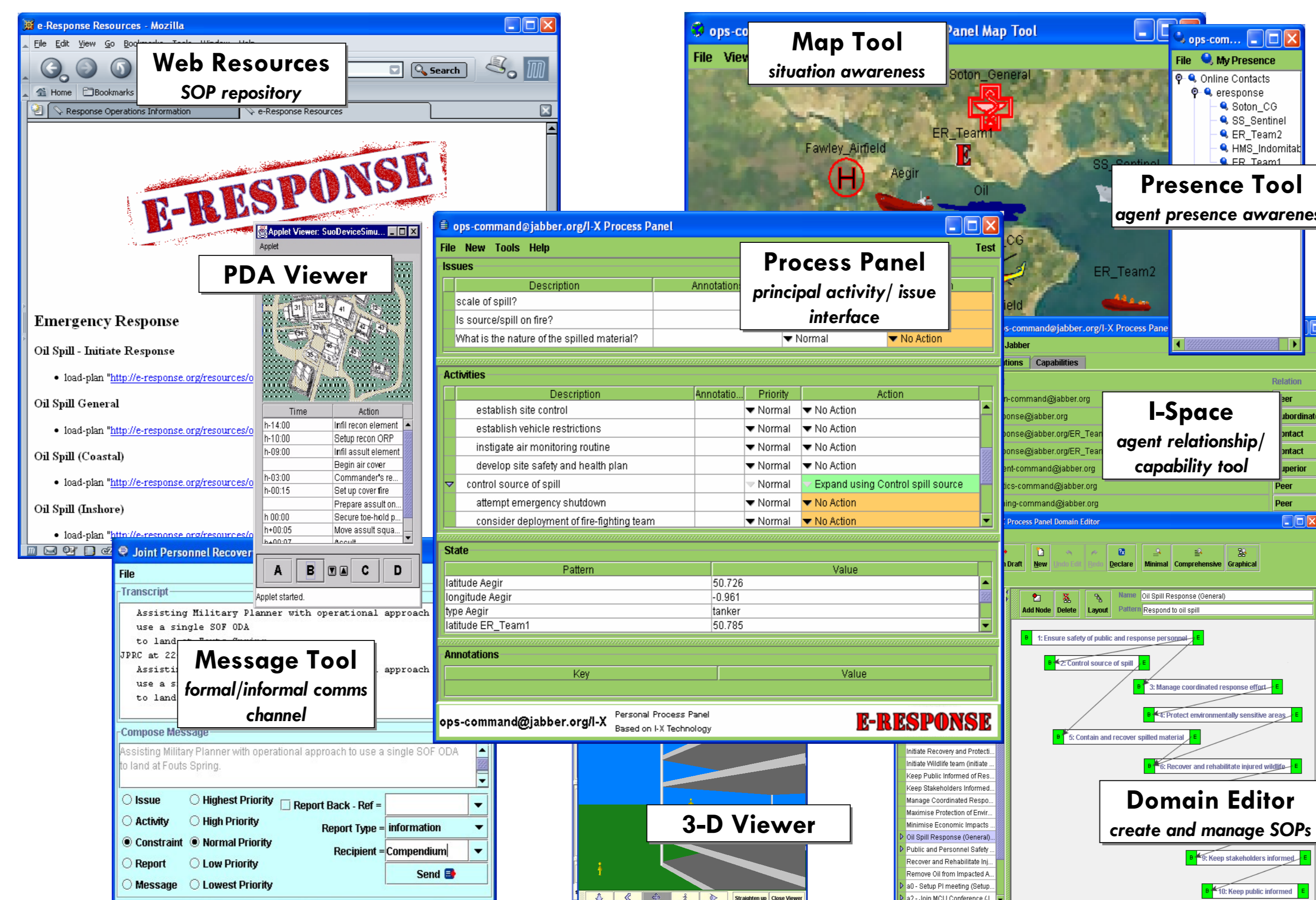

Co-OPR

Co-OPR: Collaborative Personnel Recovery Training

- Using an I-X application to support personnel recovery centres in training mode
- Support for four phases:
  - Setting up the multiple rescue coordination centres
  - Distributing and maintaining the status of resources
  - Dealing with isolated personnel or rescue incidents
  - Preparing a shift handover briefing
- Technological enhancements:
  - Import tool gives access to existing SOP resources
  - I-Sim tool for simulating training exercises
  - Improved interfaces and customised state viewers
- Evaluation:
  - Series of experiments involving USJFCOM and US Personnel Recovery Education & Training Center
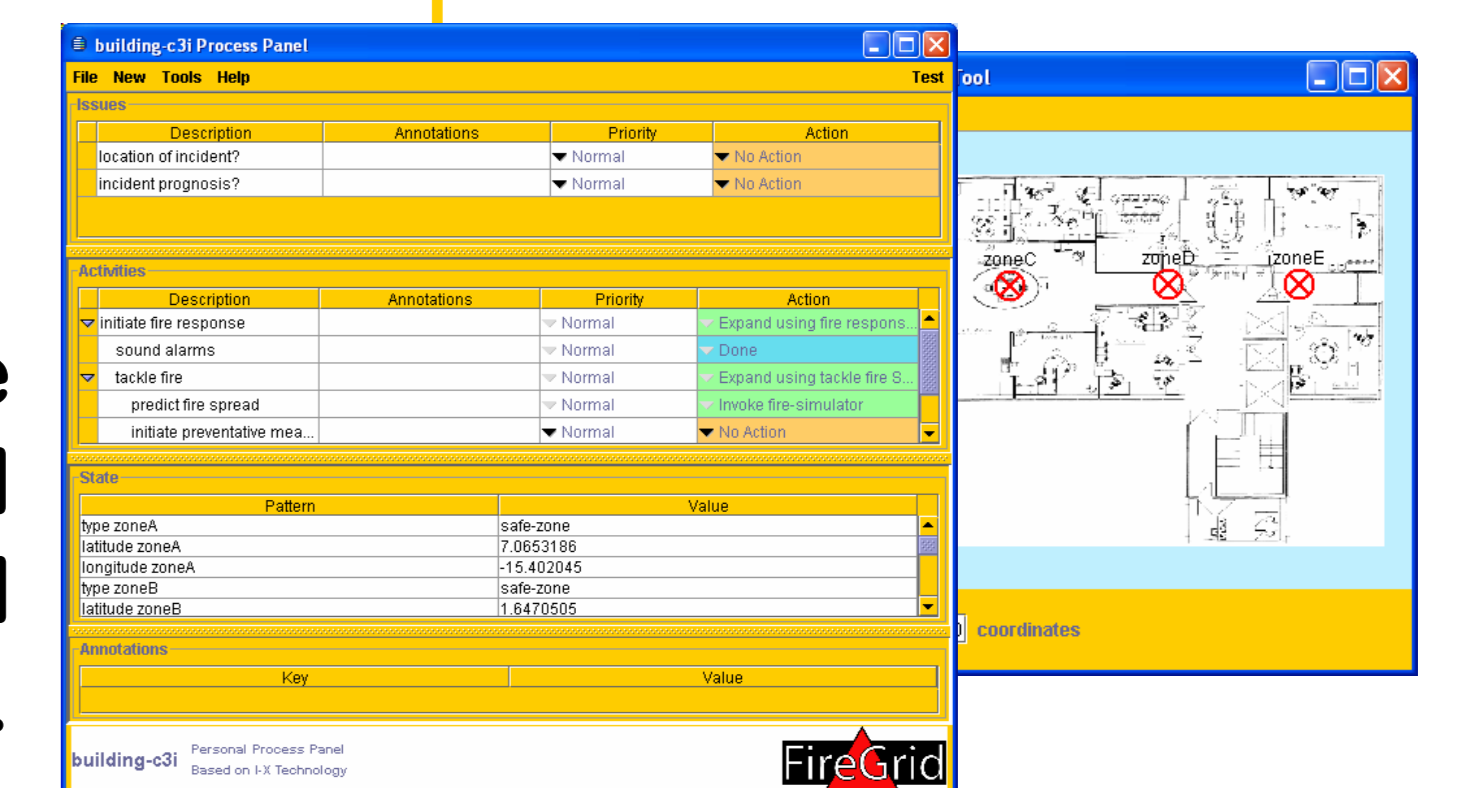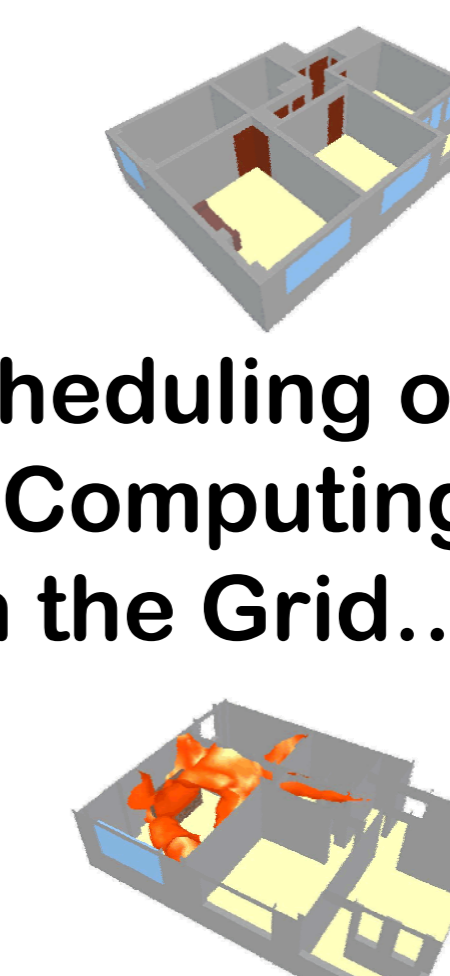
http://www.aiai.ed.ac.uk/project/co-opr/

I-X: Intelligent Systems for Emergency Response

I-X

- **I-X Technology**
  - "I" = {intelligent, intelligible, issue-based, integrated}
  - "X" is the particular tool or application
- **I-X is a framework for creating intelligent multi-agent systems for collaborative tasks**
  - Agents can be humans, robots and computer services
  - I-X tool suite provides basic human interface tools
  - All agents adopt a task-centric view of the current situation
- **<I-N-C-A> constraint model provides common 'language' for communicating and dealing with elements of the task**
- **I-X approach based on 30 years of AI planning research and experience**
- **Application focus on complex and large-scale emergency response situations**

Web Resources
SOP repository

Map Tool
situation awareness

Presence Tool
agent presence awareness

PDA Viewer

Process Panel
principal activity/ issue interface

I-Space
agent relationship/ capability tool

Message Tool
formal/informal comms channel

3-D Viewer

Domain Editor
create and manage SOPs

http://www.aiai.ed.ac.uk/project/ix/

Robust relay and integration of data from advanced sensor networks…

FireGrid

…emergency response Command, Control Communications and Intelligence using I-X…

…dynamic selection and modification of simulation models to fit emergency…

…allocation and scheduling of High Performance Computing resources on the Grid…

…'super real-time' simulation of fire spread, egress, building integrity…

…decision-making support for emergency responders.

http://firegrid.org/