

5th Annual Technology Workshop on Precision Indoor Personnel Location and Tracking for Emergency Responders

Welcome and Opening Remarks

Eric W. Overström, Provost *ad interim*

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Worcester Polytechnic Institute





- Founded in 1865
- Awards BS, MS, PhD degrees
- Over 30 majors
- ~ 3200 undergrad, ~1100 grad students

- Engineering
- Computer Science
- Life Sciences
- Management
- First BS program in Robotics Engineering



Back to the Beginning

Six firefighters missing in blaze at vacant building

Fire engulfs Franklin St. warehouse

Thursday, December 4, 1999

By Edward J. Canty, *Telegram & Gazette Staff*

WORCESTER-- Six firefighters were missing last night -- and at least some of them were presumed dead -- as a suspicious fire raged through an aging brick warehouse near Interstate 290, sending thick black smoke across the city and drawing an army of emergency crews downtown.

The blaze in the former Worcester Cold Storage and Warehouse Co. building broke out about 6:15 p.m, roared to life and spread rapidly as alarm after alarm was called. By just after 8, when an urgent evacuation order was sounded, the five-story warehouse was fully engulfed, with flames shooting more than 100 feet into the air and visible for miles.



Position-Finding Technology for Emergency Personnel is a Critical need

- 12/3/99: Six people died literally within 100 feet of safety.
- 9/11/01: A disaster of far greater magnitude, with some deaths in circumstances similar to the Worcester warehouse fire
- Current firefighter escape technology:
 - Audible alarm if the person is motionless for a period of time
 - Homing devices becoming available
 - Progress is being made but no deployable location and tracking system

Perspective

- Work at WPI began in 2000
- The search for funding
- The need for this workshop
 - System requirements
 - Sharing of knowledge
- Workshop is a unique combination of:
 - Participants: Researchers and developers (university, industry), government funding agencies, and user community
 - Format: usual presentations, but also hands-on demonstrations, and working sessions
- Workshops have been successful; constructive feedback and strong support to continue in the future

Status and Future

- Very substantial progress since 2000, but...
- Still no deployable system 9 years later
 - Very difficult technical problem
 - Also difficult from operational and deployability perspectives
 - No single solution – need fusion of approaches
 - The need is no less urgent
- How do we best proceed?
 - Many promising ideas and technical directions
 - New programs from DHS

Workshop Goals

- Knowledge acquisition
- In-depth discussions
- Personal contacts for follow-up
- Report summarizing:
 - State of the art
 - Needed research or development directions
- Presentations, Demonstrations, Working Sessions, Testing by WFD