account in future planning;

2) Communication problems between the different teams and authorities was again an obstacle. As a result, a new dispatching center network with modern data telecommunication system for fire, police, social- and health-care, and others is under construction for the whole country;

3) The incident management system must be improved. Instead of concentrating on each responding unit doing its own thing in separate branches, the focus should directed towards the management the whole situation;

4) Improvements, especially in the arena of psychosocial care, have been proven to be successful in recent years and crisis teams are in everyday readiness and operate all over the country using new guidelines.

The management of the recent railroad accidents have proved that the management of incidents with physical traumas now are functioning well. Readiness to handle massive hazardous material or bioagent exposures causing victims and community disaster needs special attention and new approaches in the future.

Key words: bioagents; communication; disaster preparedness; disasters; ferry accident; hazardous materials; incident command system; media in disasters; multicasualty accident; multicasualty incident; psychosocial care; physical trauma

Measurements and Analyses in Environmental Accidents and Disasters

Paakkanen HSJ
Environics Industry Oy, Kuopio, Finland

Gas analysis methods measuring gaseous ions produced by a radioactive source and affected by an electric field (DC or AC) are called ion mobility spectrometry (IMS). Commonly used detector constructions for the IMS have included drift tubes and diffusion chambers which used membrane inlets to the separate detector tubes from the ambient air. Recently, great strides have been made in the development of measuring devices based on IMS, much of it originating from innovations in military technology. This has led to the development of devices that are competing with the more traditional methods used in civil industry.

The IMCELL (MGD-1) technology developed by Environics Oy has promising possibilities for measuring different toxic and harmful compounds. The detector is sensitive and responds rapidly. It can accommodate high concentrations without saturation effects common to membrane inlet detectors. It can be transported from place to place as a portable device. Alternatively, it can be mounted in a fixed position to measure continuously.

In this presentation, the possible uses of MGD-1 detector in chemical accidents and disasters is presented.

Key words: chemical accidents; disasters; gas analysis; ion mobility spectrophotometry; toxic substances

How We can Prevent the Disaster of Millennium

Poikonen, Antti
Millennium Scandinavia Oy,
Helsinki, Finland

Our whole infrastructure of our society is computerised in that extent, that we are totally dependent on correct function of different computers and programs. An exact time and date calculation is involved in all digital processing's despite we are not aware of it. The date calculations are based on so called date value, which origin is from those times when computer memory was so small that even saving in each byte was critical. This historical decision results in a concrete danger that some important parts of our infrastructure can collapse just at the turn of the millennium. Because we are fully aware of this threatening possibility this man made wide scale disaster can be prevented by recoding all those part of computer software, which are involved with date calculations or assorting.

The potential disaster of millennium can include e.g. production of electric power, telecommunication or safety systems in air and ground traffic control. All functional troubles in these basic functions can result in large-scale accidents and emergencies. If the telecommunications are also jammed all emergencies (medical) services will not function properly and the appropriate help will arrive delayed if it arrive at whole. There are also many intrinsic date dependent functions in health care. For example, there will be malfunctions when patient databases are used after millennium. It is actually difficult to even imagine what all can occur! People responsible for each hospital data processing should make preventive measures, but also be prepared to backlashes.

Fortunately we have still one and half years time to prevent all those programmatic malfunctions we are aware about. Many of the date based calculations and conclusions are hidden functions, which are difficult to predict. The correction process is going on, but all the time new date dependent functions emerge. It is thus quite sure that some unexpected troubles will remain, and for those surprises we have to be prepared with plan B to act without computer support. Millennium is actually a potential dangerous situation and not any superstition.

Key Words: computers; data processing; date value; disaster; disaster prevention; malfunction; millenium; prevention;