



John Gebhard - Norwegian Forestry Museum

Norway - Technology Study

John Gebhard

May 25 - June 9, 2001

Travel Locations: Oslo, Hamar, Elvrum, Drammen, Honefoss, Skien, Torp, Trondheim, Toensberg, Oslo.

Purpose: The intent of my travel to Norway was to discuss their GIS and TETRA systems. Specifically:

GIS. Study the use of and the relationship of GIS to overall land management goals and objectives in Norway, and the linkage to wildland fire management.

TETRA. Study the process that Norway went through, costs associated, and lessons learned with the new system. Norway has been planning and implementing TETRA, a national trunked radio system. BLM, along with other federal agencies, are about to go through this same process.

Itinerary/Activities:

The itinerary provided a detailed perspective on how the Norwegians manage all risk incidents throughout their country. It included an opportunity to discuss and observe the design, development and implementation of their TETRA digital radio system, and their implementation of their dispatch centers use of GIS and GPS. By traveling extensively within Norway it was possible to gather extensive information for all of these areas.

The itinerary was also designed to provide a broad perspective of the Norwegian culture and history.



Elvrum Fire Station - Dispatch

Findings and Observations:

1. Geographic Information System/Geographic Positioning System: I was shown several demonstrations of how the Norwegian Geographic Information System (GIS) was used for dispatching. I found their use of this technology to be very impressive. When a fire call comes in they can display the phone number and

location of who is calling. They can then enter the address for the fire or other emergency call and the system will highlight the location of the building as well as roads and water sources. The map is then printed out and given to the engine crews. In the future they will install GPS as well as computer monitors in the vehicle to track the exact location as they respond to the emergency using their Geographic Information System (GIS).

Recommendations:

A combined project for the development and implementation of a GIS based system for tracking both vehicles and aircraft would benefit both countries. Utilizing our different digital radio technologies and GIS tools may increase the development time, but by combining efforts there could be mutual benefit. This has been an on-going priority for the US for several years. The Norwegians have developed a very impressive operational GIS dispatch system.



Fire Vehicle

We could learn much from their deployment.

A possible area for continued joint exchange would be to further develop a process for the tracking of fire vehicles utilizing GPS, digital radios, and GIS tools.

2. TETRA Digital Radio System: The Norwegians are very reliant on technology in their day to day lives. They expect to be in constant communication. In addition they understand the need for emergency services personnel to be able to quickly and reliably communicate between fire, police, and other emergency service departments.

TETRA is the trade name for the Nokia technology used by Norway. Norway intends to deploy TETRA as the one nationally shared system. The project has an oversight committee composed of the seven Ministries; Police, Justice, Rescue, etc. which established a project management team in 1995. They are planning for advertising an RFT(P) in late 2002 or early in 2003. The current system consists of many independent networks that provide radio communications for each separate service. The national system will replace the independent networks. The planning and overall project management for this new system deployment is very impressive. Even though we are using different technologies, I believe we could learn from the way they are deploying their national communications system.

One of my visits was to a local Nokia cell phone office to view a new product that will eventually be part of the TETRA system. This product is about the size of and

will function like an existing cell phone but it will also have the capability of transmitting and receiving radio transmissions. This product is much smaller and lighter than the typical digital radio. They may release a similar product in the U.S. if there is a demand. This product could have use in the fire program and I believe should be further reviewed.

Recommendations:

Exchange of project management experience and knowledge would be a priority, as well as testing and evaluation procedures. Problem identification and how they resolved them would also be beneficial to know about. Due to the different digital technology being implemented direct sharing may be difficult. Continuing the discussion with Nokia concerning their cell phone two-way radio product would be valuable.



Skien Fire Station

On June 7th I had a meeting with the Director of DBE, Mr. Anderson. Even Skredsvig and I met to discuss the current exchange, opportunities for future exchanges, and the overall goals of the exchange program.

In August of 2001 Nils-Erik Haagenrud will be traveling to the U.S. In the past three years, our Norwegian guests have been very interested in the Incident Command System (ICS). In addition to talking to him about ICS while in Norway, I gave a presentation to several Fire Chiefs (twenty).

Background:



Practicing Vehicle Rescue - Skien including structural fires, forest fires, and other emergencies.

The Fire program in Norway is currently going through an reorganization. They are reducing the number of municipal Fire Chiefs by about half. Because of this ongoing major reorganization, they believe this may be a very good time to implement ICS as one of the changes being considered. They believe that the ICS would be beneficial for the all risk needs,

In addition, Norway is in the process of reorganizing their Civil Defense System. Because of the number of counties and their size, they have found it challenging to coordinate resources among the local governments, municipal fire departments, the military and volunteers. They believe that ICS may assist them in overcoming some of the coordination and communication challenges.

Recommendations:

I would suggest we provide the following information for Nil's:

/All risk capabilities of ICS.

/For structural fires, they may be able to utilize all levels of organization that ICS provides.

/For Forest fires the Initial attack and Extended attack portions may be the most appropriate.

/Thru the use of existing training materials, CD's videos, and hands on experience ICS may be a viable tool for them.

/Fire investigation is another potential for sharing.

/Equipment/

/Tools

/PMS Information

/Fire Shelter Use

/Training Materials

/Qualifications System

/Fire Reporting Systems.