



Connecting radios all over the world

Customer Examples

V 2.3

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A Mimer SoftRadio system can be configured in many ways. This paper describes some customer cases. Please also see “Basics” and “Special functions”.

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2 Taxi Dispatch

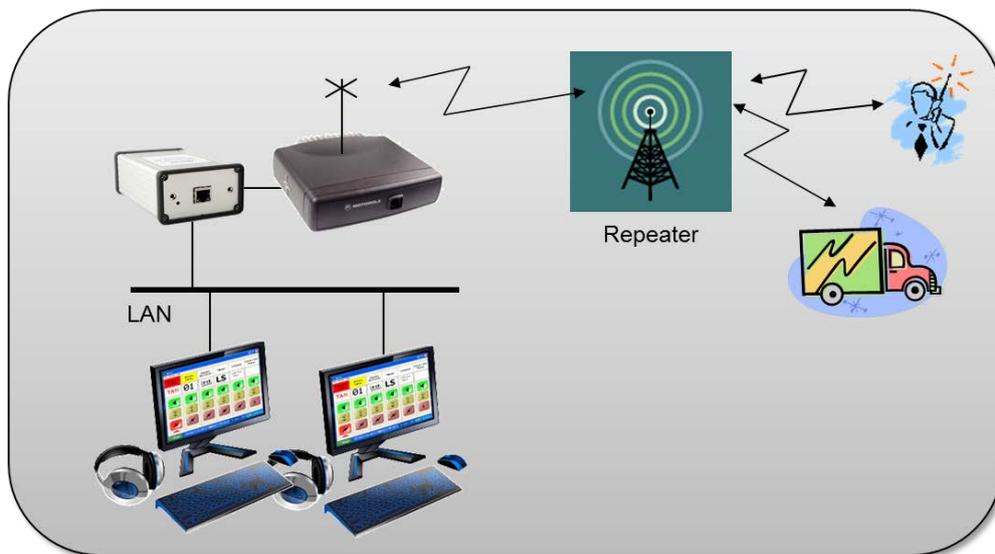
A typical taxi or courier dispatch company has a number of dispatchers in one large room. They are always on the phone and the room often feels noisy. In some cases only a few have a radio control unit the rest have to walk over to a desk with a radio when they need to speak to a car.

With the help of Mimer SoftRadio they can integrate the radio into their computers, there is no need for an extra control panel on the desk and all dispatchers have access to the radio.

Many taxi companies are today concentrating their work to larger centrals where one city central covers several cities and therefore need to remotely control their radios. We have examples of taxi companies that dispatch cars 400km away.

2.1 Small Central

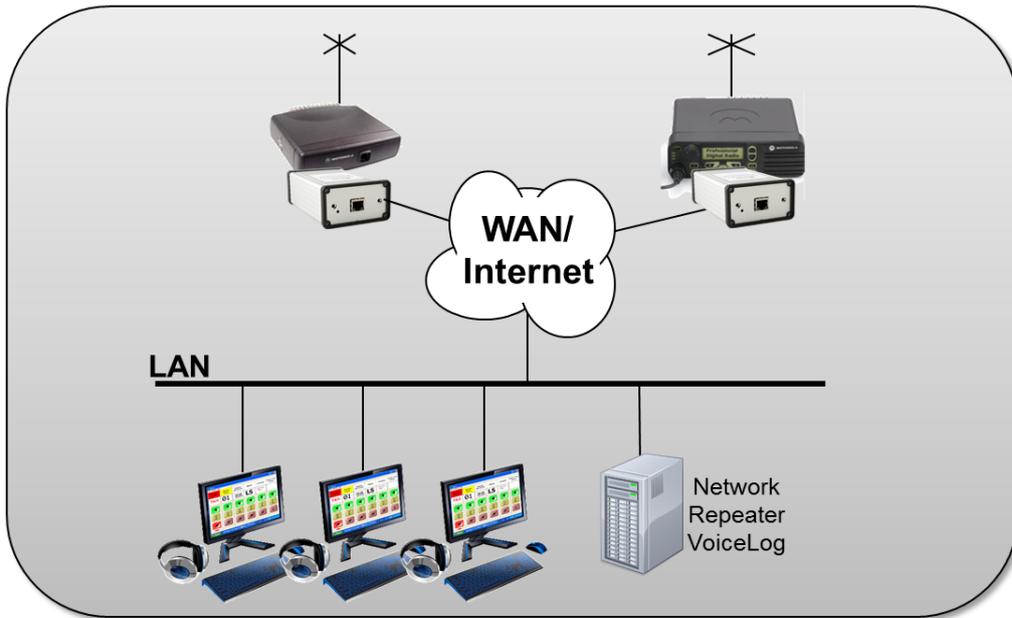
A typical small central has one radio channel either local controlled with repeater or remote via internet.



2.2 Large Central

A larger central has several radios both local and remote in different cities. In order for all dispatchers to access all radios a NetworkRepeater is placed in the system. For quality reasons and for help to the dispatchers a VoiceLog is also connected.

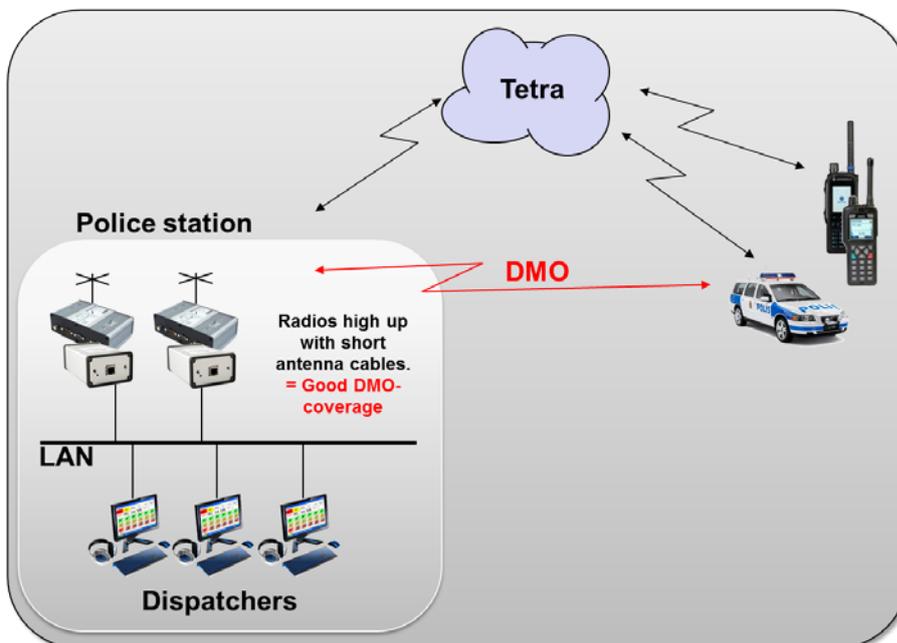
The option GroupSend helps the dispatchers to find the cars by simply transmitting on all base stations at the same time.



3 Tetra - Public Safety

Large public safety systems, mostly Tetra, are built with lots of redundancy so that they will never completely break down. But what if...

Using Mimer SoftRadio to locally control one or more radios at each police station also gives some extra benefits.



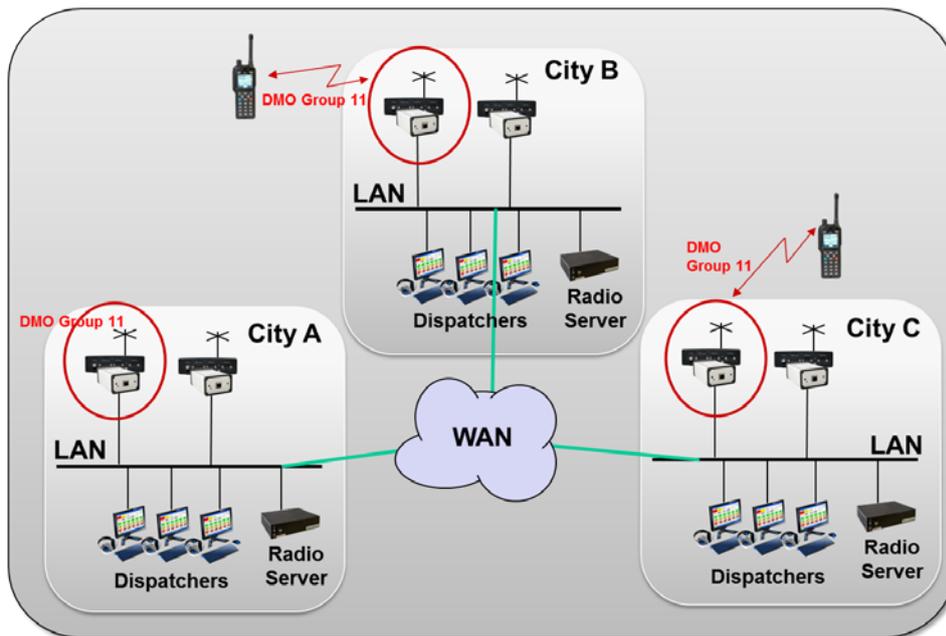
Two radios installed at the local police station.

If the local radios are placed high up in the police building, and with a short areal cable, you get good radio coverage from the radio. If you then

connect several local radios together via SoftRadio and CrossPatch using a WAN or the Internet you have your own backup system.

As long as the Tetra system works you can use your radios in TMO and have good dispatcher positions. If the Tetra system breaks down you can set your local radios in DMO mode and continue working with the local users.

Via the WAN or Internet connection you can remotely use other radios in DMO or set them up as DMO repeaters. Setting the same DMO talkgroup on several radios in different areas and connecting them into a large CrossPatch will give you a wide area talkgroup.



Three cities connected through CrossPatch on the same DMO talkgroup.

4 Fire Station

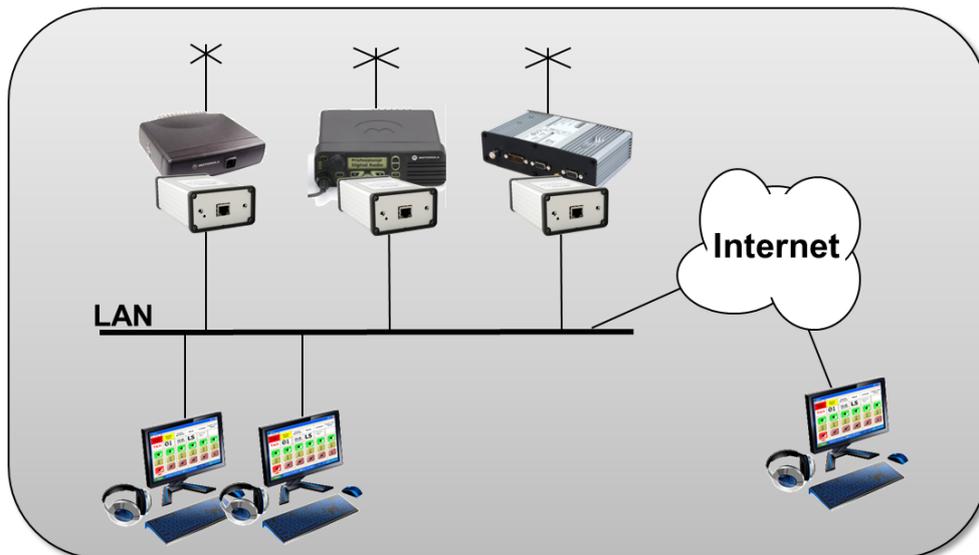
A typical fire station or police station has one or more radios on a desk. These take up space, are hard to connect to a good antenna and only a few people have access to them.

With Mimer SoftRadio the radios can be placed where they are not in the way, and the antenna can be placed high up and can have a short connection cable (for low loss). All computers at the station can be used as dispatchers or for monitoring only.

Radios of different types can be mixed in the system and calls can be cross patched between them. This means for example connecting a Tetra talkgroup to an analogue channel.

Connecting to the old analogue system today and starting to use it will make migration to digital easier in a few years. The same computers and the same software will be used. No need for special training, no large installation to do, just connect one more radio.

If the system is connected to the Internet a user can connect from his home or from a fire station in another town maybe. This will get him the same access as if he was sitting locally.

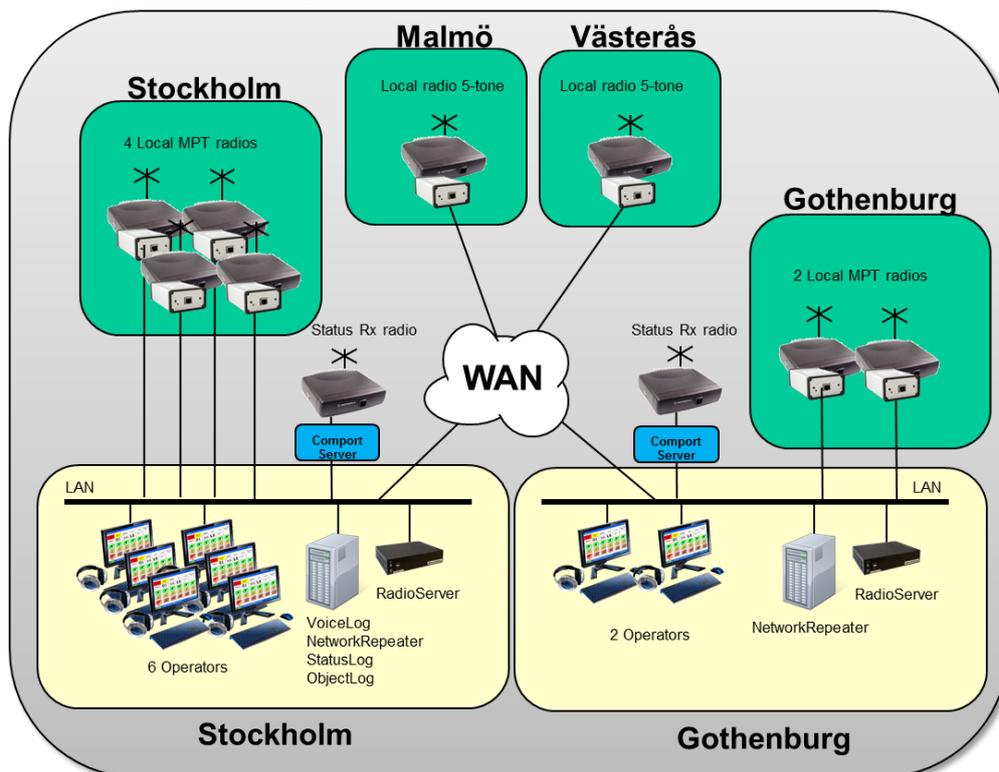


5 A large security company

Large security companies often have a mix of radio systems coming from older companies that have been bought up. Some of them are in other towns and need to be remotely controlled.

There is often a need for voice logging and also status logging with time stamping of all activities and incidents.

This mixed environment is easily handled by Mimer SoftRadio with VoiceLog and StatusLog.



The example above shows a large security company with alarm centres in two towns and radios both in MPT systems in those towns and 5-tone radios in other towns.

The two alarm centres can both take over for each other.

6 Long distance back up

We have a security company in Stockholm that uses a MPT-system. They have a local separate radio that receives all alarms. But this is not enough; they also need to have the alarm to go to a separate alarm centre in parallel.

This is solved with a radio at a different location monitoring the MPT-system and connected to a Network Interface and then through the Internet to an alarm centre 600km away.

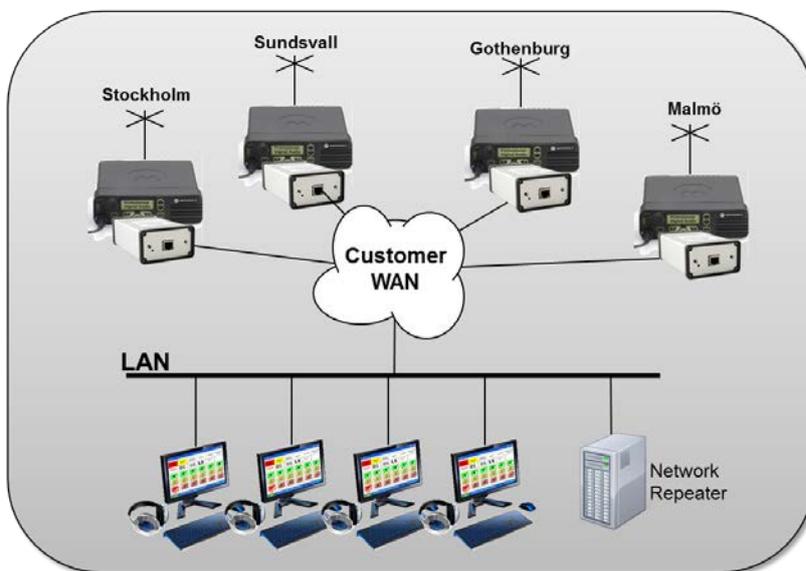
7 Casinos

The state owned casinos in Sweden, Casino Cosmopol, has a common alarm central located in a Stockholm suburb. There they have camera monitoring of all four casinos and also radio communication to the casinos.



The system is built with SoftRadio and Motorola MotoTrbo and run on their own WAN.

There are both local control of the radios at each casino and remote from the alarm centre. The system can be expanded with more radios as well as a VoiceLog at a later stage.



8 Airport

Airports are places with many radio systems; Mimer SoftRadio then becomes ideal for the operators. They can handle calls from all types of radios.

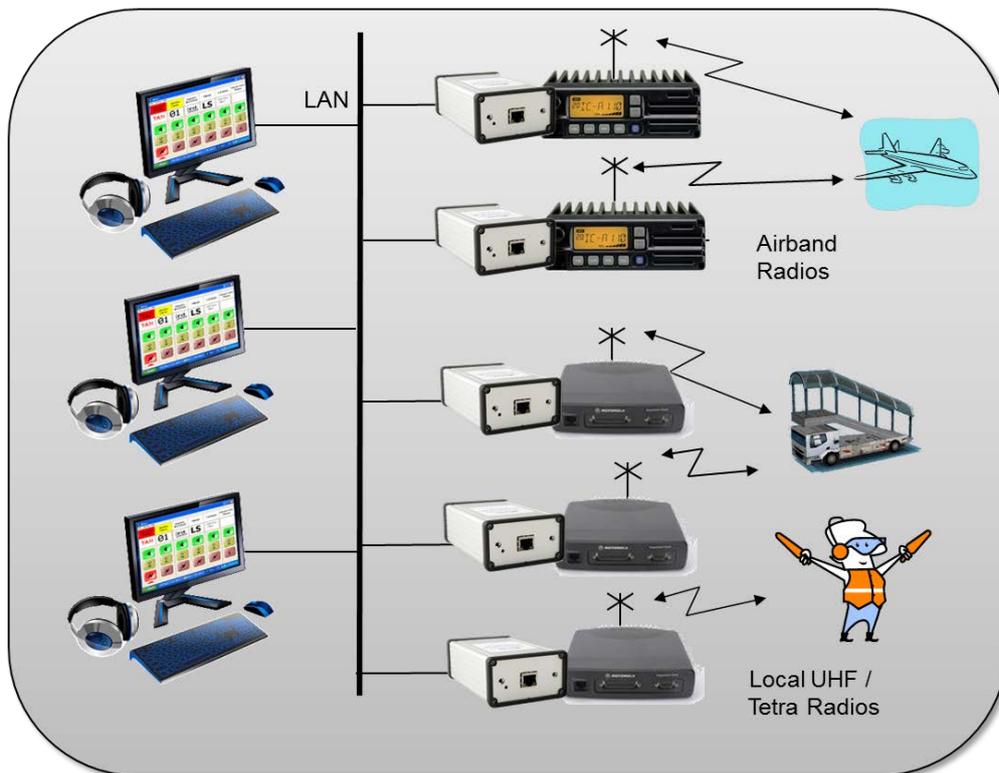


8.1 Dispatcher

An airport dispatcher can connect to a number of different radio systems through his Mimer SoftRadio and also to phones. Through the use of CrossPatch, calls from air band channels can be connected to ground channels or talk groups.

The radios at a small airport can also be remotely controlled from a larger airport to save operators. In this way one airport can talk to planes anywhere in the country when they are approaching an airport and also to the ground crew that are working with the plane during turnaround.





8.2 At the gates

The larger airports have trunked radio systems and often use talk groups for the work that is done around a gate. This is very effective; all personnel involved with one flight will hear each other from baggage loading and fuelling to boarding card checking. But there is also a demand to get the pilot and purser on-board the flight into this talk group. The aim is to shorten the turnaround time for each flight at the airport.

We have solved this by letting the pilot, purser and maybe more of the cabin crew, call into a conference call with their GSM-phones. The conference call then automatically calls up a Mimer Network Interface and sets a radio to the right talk group. All personnel working around and inside the plane can then be in the same conference, regardless of if they use a radio or a phone.

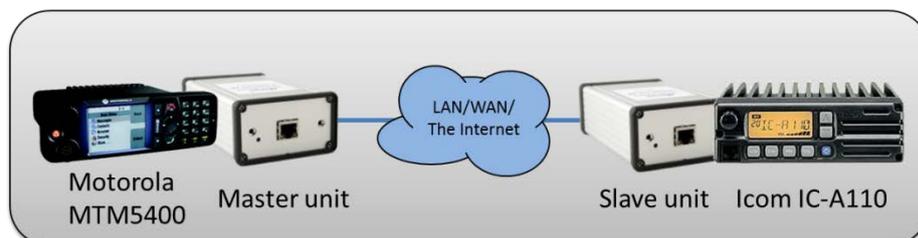


The system is set up in most Swedish, Danish and Norwegian airports for analogue radio, analogue trunked radio and Tetra, depending on the respective airports system. The network interfaces have been built for both analogue and digital phone connection.

8.3 Cross patching

We have also made a special CrossPatch solution for airport use. It connects an Icom IC-A110 air band radio to a Motorola MTM5400 Tetra radio over the Internet or local LAN/WAN.

This gives Tetra users (ground personnel) the ability to talk to air band radios (planes). The system can be set up for almost any two types of radios. The functionality can also be achieved by using SoftRadio with the option CrossPatch.



9 Trucking dispatch

At a trucking dispatch in Stockholm they use one radio with open channel and have four dispatch positions. They always monitor the radio channel in their speakers. But when one of the operators lifts his handset all speakers are closed. When he puts the handset back, the speakers all open again. This is done via a data message between the operators Mimer SoftRadio.

10 Command and Control Vehicles

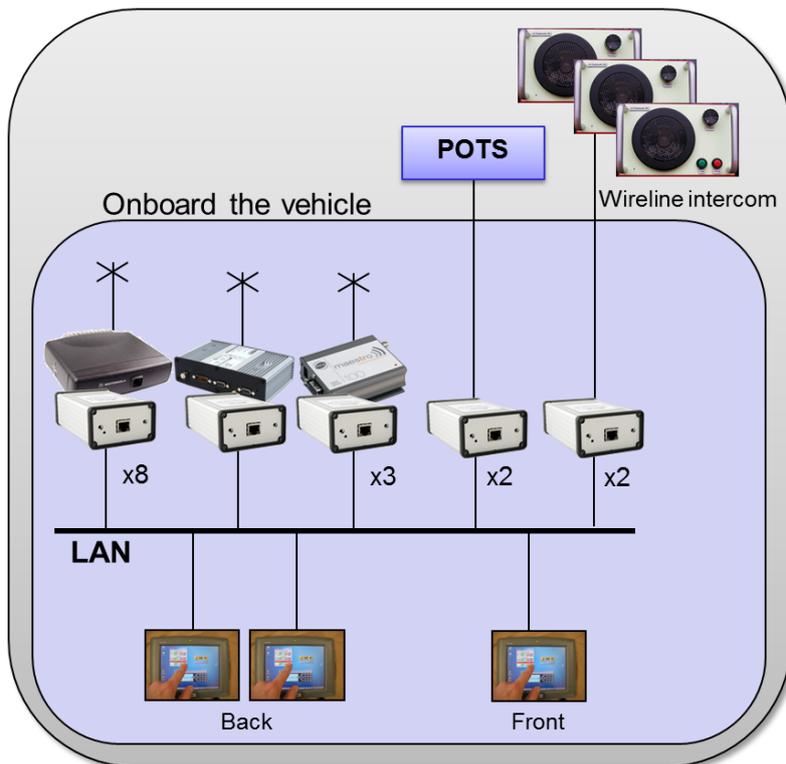
The first system built with Mimer SoftRadio was four command and control vehicles for the fire defences in the Stockholm Area. They needed eight two-way radios and three mobile phones plus land line phone and intercom in each car. All dispatched from three operator positions. We saw before us a mess of microphone cords and radio control heads and realised that a new system was needed.



The solution is that every operator position has one 8" touch screen where the operator can handle all the systems above. Together with the screen they have one headset or microphone/speakers. For every radio and phone it is selectable if the audio should be in the right or in the left speaker. Two of the radios can also be switched over to external antennas through push buttons on the screen. All functions on all radios and phones are handled from the same touch screen.



The picture shows two operator positions in the vehicle, the SoftRadio screens are the small screens at the bottom of the panel.



11 Ships

Large ships have many different communication paths. It is not only Marine VHF; it is UHF on board channels, safety channels, long distance channels, short wave radio and phone through GSM and satellite. If it is the coast guard they need to speak to fire and police maybe via Tetra and often there is also an on-board intercom system.

All of these systems need to be accessed from many positions in the ship. Mimer SoftRadio is then very useful, it might be that we cannot mimic all radios control heads, but we can definitely connect all audio channels into one system, reducing the need for many handsets at each operator.

With Mimer Local CallLog for Marine systems you can also decode ATIS and DSC messages from the marine channels.

12 Tunnels, railroads

When building radio networks that need a very long coverage area like a railroad, a pipeline or a tunnel, there is a need for many base stations. In this case the Network Interfaces at the base stations can be connected together via LAN so that incoming audio on one base station is retransmitted on all, making them work as one large repeater.

13 Harbour

At a harbour many different types of systems need to work together. You have everything from loading ships, to calling ships and pilots coming in to the harbour, to safety and to security.

With Mimer SoftRadio at the harbour operating central all types of systems can be handled from the same operating PC. Calls can be cross patched between systems and connected to phone lines. It does not matter if one system is Tetra and another is Marine VHF all are accessed from the same operator console.

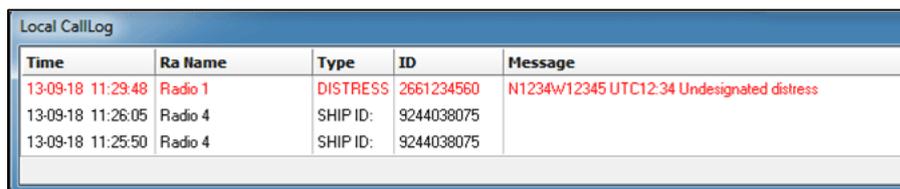
14 Coasts and Rivers

Coastal lines or waterways such as rivers and canals often have several base station sites connected to one, or more, dispatcher centrals. At these centrals a continuous monitoring is needed of certain channels and the selective calling systems ATIS and DSC.

Mimer SoftRadio can easily handle both base stations with fixed channels (for example CH16) and base stations with selectable channels.

With the option Local CallLog, ATIS and DSC messages can be decoded, logged and presented for the dispatchers.

The use of a Mimer VoiceLog for audio recording is also recommended.



Time	Ra Name	Type	ID	Message
13-09-18 11:29:48	Radio 1	DISTRESS	2661234560	N1234w12345 UTC12:34 Undesignated distress
13-09-18 11:26:05	Radio 4	SHIP ID:	9244038075	
13-09-18 11:25:50	Radio 4	SHIP ID:	9244038075	

ATIS and DSC messages received at a dispatcher

15 Industrial

At industrial sites there is often control rooms filled with operator screens for the process at the industry. These screens are all dedicated for their own purpose and no other software can be loaded on the same machines.

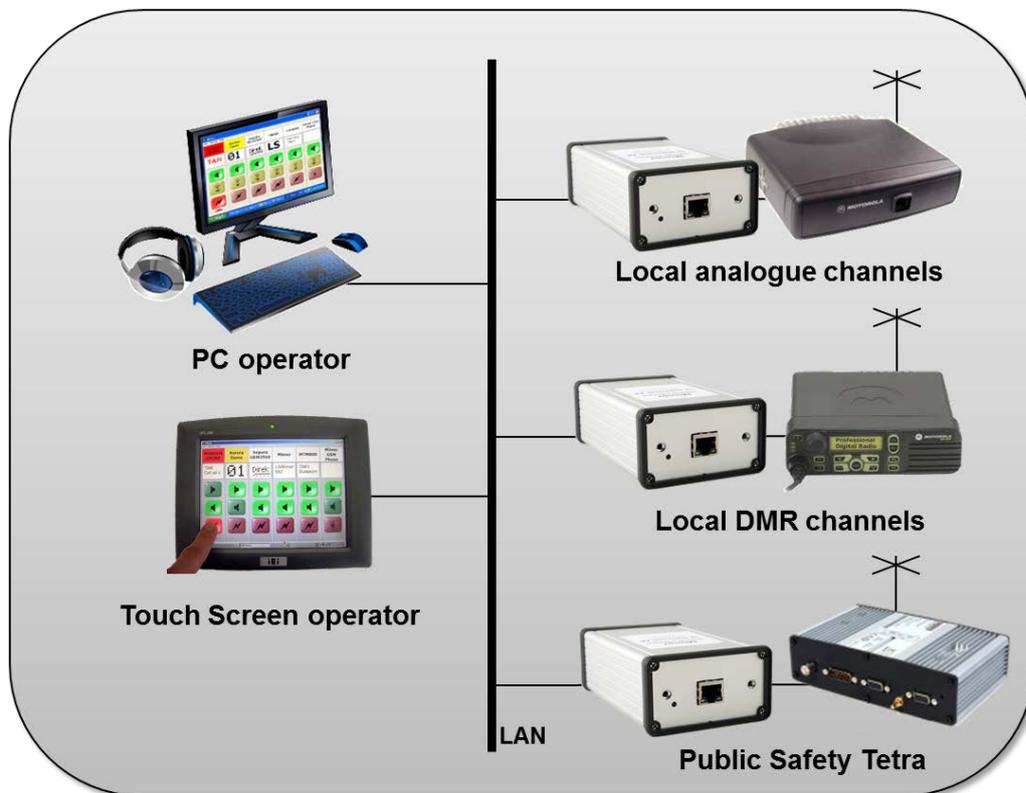
For that purpose we use small touch screens with built in PC:s. This means that the Mimer system will have its own screens that fit nicely into the control room environment without disturbing the plants process equipment.

The Mimer Software is made to be usable via touch screens, all the standard push buttons are large enough for your index finger.

Screens can be external, installed into panels or even waterproof if needed.

Systems can be mixed so that you for example may have the industries standard radio system mixed and cross patched with a local system used between headsets with built in radios.

If temporary staff comes to the site bringing their own radio system, this can also be cross patched into the SoftRadio system.



An example from an industry with both analogue and digital radio, both industry radio and public safety radio.



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www.softradio.se

mimer@softradio.se