

Trunked Systems

TRUNKED SYSTEMS

COMPLETE SOLUTIONS FOR TRUNKED NETWORKS

In sectors such as transport, local government, security services and the utilities, privatisation can segment working departments. Unnecessary breakdowns in communication can cause unnecessary business pressure. Ineffective management of mobile resources can cause further detriment to your business.

Access to shared information will help to alleviate these difficulties and the benefits include improvements to both your business performance and the level of customer service.

Radio communications add an extra dimension to your service by simply allocating the nearest vehicle to the customer so you can save on journey fuel costs, improve customer response times and monitor performance.

From a standard despatcher, operators have visibility to monitor up to 64 incoming calls, and recognise emergency situations.

With Speech or Short Data calls, operators can relay information from the control room to alert different departments.

To compare the benefits between a conventional radio system and a trunked network, here is an example to show how Team Simoco helped a local authority manage their mobile fleet resources.

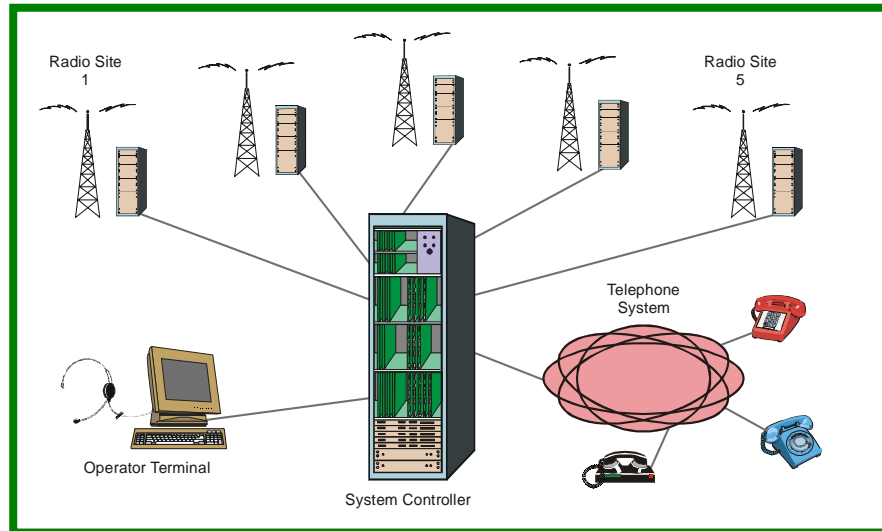
Trunked Versus Conventional

Team Simoco Trunked Radio Systems offer a wide range of options specifically to meet your requirements. The concept being, there are two key principles applied to private mobile radio (PMR).

- 1. It is statistically improbable that all users will want to make a call at the same time.**
- 2. Most conversations are relatively short in duration.**

Trunking not only provides a means of fully utilising a limited number of radio channels, it can also provide a comprehensive resource management tool for organising departments within Local Government.

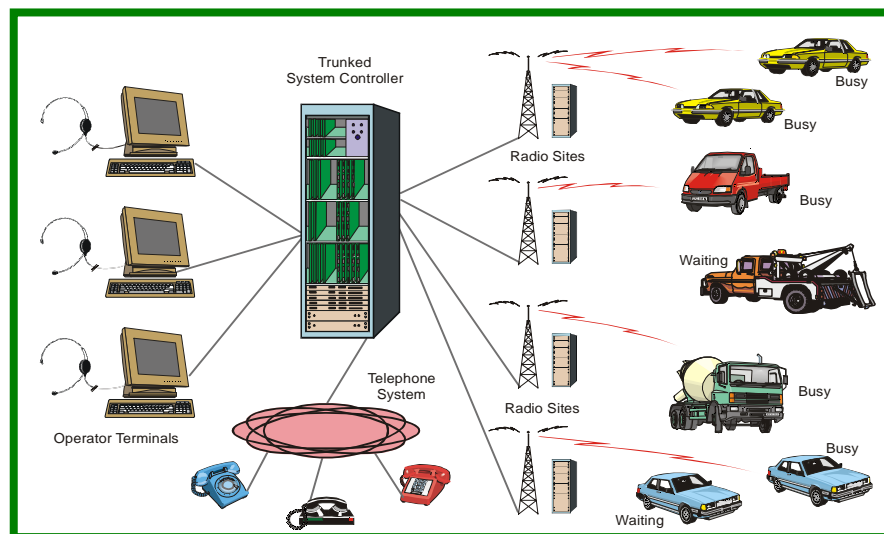
Conventional Radio System



Imagine a local authority that operates with a conventional radio system using four exclusive channels. Each channel dedicated for use by specific departments. i.e., highways, social services, parks and renovation.

On a typical weekday morning, there is a high probability that half of the channels will be so busy that an average wait of several minutes to gain access to a clear channel will not be untypical. The remainder of the channels may be relatively idle because the communication requirements of those users may result in peak traffic densities at other times during the day.

Trunked Radio System



With four channels managed by a Team Simoco trunked system, each user would have automatic access to all four channels. Channel air-time would be automatically allocated in such a way to equally distribute the communications load across all four channels, making efficient use of the available channel resources.

System Elements

The main elements of a Team Simoco trunked radio system include a series of base stations located at prime sites to assure optimum coverage. Each base station transceiver is capable of handling data as well as voice communication. One of the base station transceivers is assigned the duty of transmitting and receiving data required for the purpose of managing the radio units associated with the system.

The management of base station transceivers is performed by the Trunked System Controller. This contains a processor that acts much like a traffic policeman. In that, it processes all of the control information data, assigns base stations as requests for voice channel access are received, and generally monitors and maintains order in the system. Team Simoco's trunked systems can be networked to provide a wide area coverage system from a local district through to a national network.

Flexible

The end users terminal equipment consists of mobile and portable radio units, radio or line connected dispatcher terminals as well as public and private telephone networks.

The terminals are equipped for a variety of communication requirements enabling only simple call set up through to comprehensive systems for data as well as voice communication. All radio and line connected units are individually assigned to a number which uniquely identifies them as subscribers on the system. Individual subscribers may also be identified as a member of one or several groups of subscribers.

Resource Management

Together with detailed call logging, Team Simoco's trunked radio systems can provide full resource.

Calls can be charged on an individual department basis and cross-charging can occur to manage accounts efficiently.

Technical Data

NETWORK DIMENSIONS	<ul style="list-style-type: none"> 1 – 1152 Radio Channels 1 – 156 Line Despatchers 1 – 104 PABX or PSTN Lines 10,000 Subscriber Database
TRUNK SITE CONTROLLER (TSC)	1 – 16 Radio Channels
TRUNK SITE SWITCH (TSW)	<ul style="list-style-type: none"> 1 – 12 TSCs 1 – 48 Radio Channels 1 – 8 PABX or PSTN Ports 1 – 1 Despatcher Ports
MASTER TRUNK SWITCH (MTS)	<ul style="list-style-type: none"> 4 – SMTSs Or 123 TSWs 1 – 12 Despatcher Terminals
SUB-MASTER TRUNK SWITCH (SMTS)	1 – 2 TSWs
CALL TYPES SUPPORTED	<ul style="list-style-type: none"> Individual Speech Calls Include Calls Group Calls – Conference & Broadcast Closed User Groups Announcement Calls Call Diversion And Transfer Open Channel Calls Status, Short & Non-Prescribed Data Lone Worker Calls
CALL PROCESSING	<ul style="list-style-type: none"> Optional Control Channel Modes Dynamic Frequency Allocation Full Off-Air Call Set-Up (FOACSU) Partial Off-Air Call Set-Up (POACSU) Call Queuing Dynamic Groups Roaming And Registration

For additional information on this or any other Simoco product, visit our web site at:
www.teamsimoco.com

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