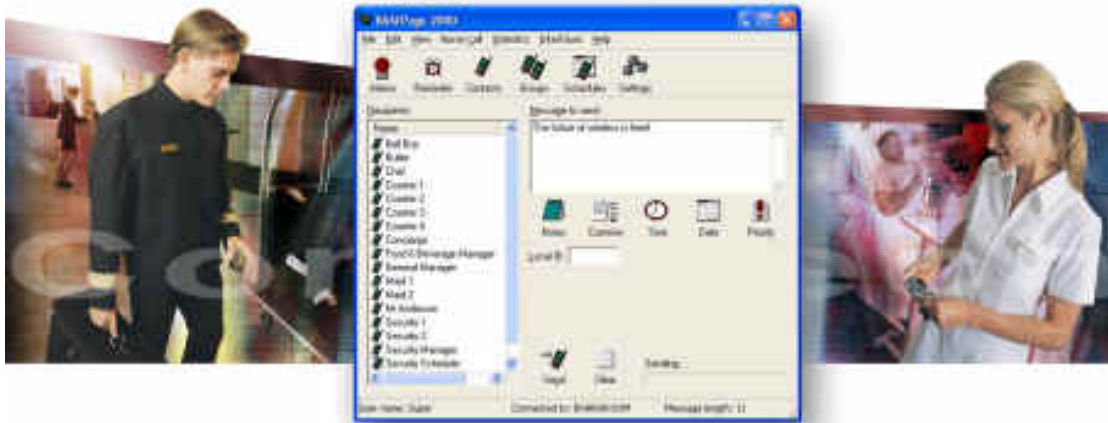


Message Systems

Communication Gateways

Hospital Communication Proposal

2008



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TABLE OF CONTENTS

Capability Statement	4
Executive Summary	7
General Technical Specifications:	9
CommtechMessenger (BasePage)/ Fusion (Part of the functions)	9
Manual Dispatch of messages	10
Recipient & Group Management	11
Contact Management	11
Group Management	11
Security (for authorized system usage)	12
PBX Message Dispatch.....	13
Email Integration	13
Patron/ Patient/ Family Messaging.....	14
Integration in Nurse Call Systems.....	14
Interfacing in Building Management, Security and Fire Alarms.....	15
The diagram above, featured earlier, depicts at the bottom the wide range of non-standard systems to which CommtechMessenger can interface, and regardless of the other systems' non-standard interfaces.....	16
Rostering Management	16
Escalation Paths	17
Reporting and Statistical Analysis	17
City Wide Paging	18
Inter System Networking	18
Message Receivers.....	19
DECT Handsets.....	19
Description	19
Features.....	19
Benefits.....	19
6120 Alphanumeric Page Receiver.....	19
Description	19
Features.....	19
Benefits.....	20
4140.....	20
Description	20
Features.....	20
Benefits.....	20
Patron Pager.....	20
Description	20
Features.....	20
Benefits.....	21
Conclusions.....	21
Details of Solutions - FUSION.....	22
Details of Solutions - CommtechMessenger	23
APPENDIX	24

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Capability Statement

Message Systems is the sole distributor in Africa for **Commtech Wireless**, a world leader in the design and manufacture of on site and area wide wireless messaging and communication infrastructures. **Message Systems'** core markets lie in four distinct categories; Hospitality (Hotels, Resorts, Casinos and Restaurants), Healthcare, Commercial/ Industrial and Emergency Services.

Message Systems' product range includes a broad spectrum of messaging communication technology, which integrates communication media such as Email, SMS, Paging and DECT (Digital Enhanced Cordless Telephone) systems amongst others. Solutions include terminals and encoders, from 'push button' systems through to countrywide communication networks.

All associated peripherals such as alarm interface hardware, voice prompted telephone cards (which operate using IVR – Interactive Voice Response), transmitters, encoders and receiver hardware are also available from **Message Systems**.

The solutions installation base extends to over 6000 sites across more than 53 different countries of which more than 2500 are hospital installations and others include, major hotels, casinos and resorts through to state wide emergency service networks, hospitals, aged care facilities and other mission critical systems, demonstrating that you can place heavy reliance on these communication systems with success, as many clients world-wide have. Some of the sites running this technology world-wide are listed by industry after the solutions detailed below.

- Bendigo Hospital, VIC
- Brookwood Hospital, AL, United States
- Bulli Hospital, NSW
- Buringgrad Hospital, Thailand
- Cairns Base Hospital, QLD
- Darwin Private Hospital, NT
- Epworth Hospital, VIC
- Forbes Hospital, NSW
- Fremantle Hospital, WA
- Gawler Hospital, SA
- Greater Murray Health Group (13 Hospitals), NSW
- Greenslopes Private Hospital, QLD
- Invercargill Hospital, New Zealand
- Jewish Hospital, KY, United States
- John Flynn Medical Centre, QLD
- Macquarie Hospital, NSW
- Mater Hospital (Mackay & Townsville), QLD
- Modbury Hospital, SA
- North West Regional Hospital, TAS
- Prince Charles Hospital, QLD

Message Systems' Communication Technology Solutions are Summarised for many applications as follows:

HOSPITAL/ AGED CARE

- Hospital Messaging and Wireless Communication Systems
- Nurse Call and Patient Call Wireless Messaging
- Doctor and Nurse Callout and Escalation Messaging
- Aged Care (Old Age Home) Wireless Messaging
- Frail Care Wireless Messaging

EMERGENCY SERVICES

- Emergency Services Messaging Paging/ SMS/ Escalations (Ambulance and Fire etc)
- Control Centre Messaging Dispatch

RESTAURANTS

- Restaurant Kitchen/ Bar Wireless Messaging
- Restaurant Waiter Wireless Messaging
- Patron Wireless Messaging
- Table Wireless Call Messaging

HOSPITALITY

- Resort Wireless Messaging and Communication Integrated Solutions incl Restaurants above
- Hotel Wireless Messaging and Guest Communication Systems
- Club Wireless Messaging

COMMERCIAL

- SMS Marketing/ Client Messaging
- SMS Communication Systems (Person to person)
- Web based Wireless and SMS Messaging
- Email <-> SMS Messaging
- DECT Phone Messaging
- VOIP Wireless Messaging
- Telephony Messaging Solutions
- Callout and Escalation Messaging Solutions
- Lead/ Job Card/ Problem Messaging and Escalation control
- Roster and Schedule Messaging
- 365 day Reminder and Scheduled Messaging
- IT System and Network monitoring, callout and escalation control
- Web Messaging (SMS/ Email/ DECT etc)
- Messaging Gateways (inbound and outbound communication of all media)
- LAN based Messaging and Wireless Communication

EDUCATION

- School Messaging Solutions
- University Messaging and Communication Solutions
- Crèche Messaging Solutions
- Parent Messaging and Paging Solutions
- Sunday School Wireless Messaging Systems

INDUSTRIAL

- Industrial Manufacturing Automated Wireless Messaging
- SCADA Messaging and Control Solutions
- Wireless Remote Control Systems
- Building Management Wireless Messaging
- Fire Alarm Wireless Messaging

SECURITY AND ALARM

- Security Control Wireless System Solutions
- Security Wireless Messaging
- Alarm Monitoring (wireless and wired)
- Alarm Messaging and responsive control

This list is extensive but by no means complete, but is intended to demonstrate the diversity of solutions, many of which may apply to communication situations you require addressed.

To demonstrate the reliance that can be placed on the communication solution proposed, an appendix, which lists examples of sites and industries where heavy reliance on a communication solution is essential and is provided by the same technology, has been included.

We trust this will give you peace of mind as you have selected this state-of-the-art solution for your business.

Executive Summary

CommtechMessenger, and the new **Fusion** modular product series are messaging platforms designed for Microsoft Windows (Fusion needing no PC, operates via a Windows Explorer interface), enabling the seamless integration of all forms of text messaging (and system control). Whether you are dealing with an on site paging system, Short Message Service (SMS), email or DECT – **CommtechMessenger** and **Fusion** delivers messages effortlessly and integrates all these messaging media. **Fusion** when upgraded with **CommtechMessenger** integrates with a myriad of third party systems such as fire alarms, security systems, nurse call and building management systems enabling alarms and calls to be directed immediately to the appropriate staff, not to mention that **CommtechMessenger's** call statistics (when calls were activated, what they were for, who responded to them, how long they were active for and when they were cancelled) are therefore logged automatically as part of the messaging action. In addition, messages may be initiated from a simple interface on any PC on the network (or even wide area network) or via the PBX or an SMS or email, wireless call button or even activation through an existing nurse call button.

Some of the features provided by **CommtechMessenger** and most also by **Fusion** include;

- Allows staff members to contact each other via on site pagers, other site pagers (if linked to other sites through **CommtechMessenger** capability), and DECT handsets, SMS to / from mobile phones and email to / from anyone.
- Integration with the hospital's PABX permits any telephone extension to be used to send out predefined alphanumeric (text) messages or numeric codes.
- Nurse call alarms are reported directly to designated nurses with localised, ward level allocation of staff to patients.
- Client/Server topology enables message dispatch from any PC connected to the hospitals local area/ wide area network (or remotely via the Internet)
- Transparent interface into Security, Fire and Building Management Systems and various third party alarm systems enables all alarms to be consolidated into one central application and reported to the appropriate staff members and escalated to management automatically as required.
- Inter-system networking and 'roaming' capabilities enables hospital staff to move from hospital to hospital and to be contactable at all locations (through linked sites as mentioned above) or through SMS.
- In built report generation and audit trails enables administration to check when messages were dispatched and to whom.

An icon diagram on the next page explains graphically at a high level some of the communication opportunities exist and management of these different communication media, while simultaneously integrating the use of all of these in a logged and controlled fashion.

The closing summary at the end of this document provides a broad overview and summarises the advantages and benefits (including ROI) which may be required to justify the installation of messaging in a large hospital organisation such as yours.

The diagram below depicts how **CommtechMessenger/ Fusion** which is essentially a powerful communication gateway server could provide seamless replacement to your existing unsupported hardware with its many interfaces.

The server can support dial-in DTMF messaging and can also prove alphanumeric messaging via this interface, typically not possible with older systems.

Remote paging/ messaging connections are likely to be via TAP connections to the current ailing hardware which is a standard messaging protocol in **CommtechMessenger/ Fusion**, so messaging via the current systems on all remote sites (subject to detailed specification confirmation) is possible and none of the remote sites would even be aware that the central communication infrastructure has changed.

Upgrade to **CommtechMessenger/ Fusion** would allow the integration of the alarming and other applications, while email, SMS and paging are available as depicted through licensed interfaces. Ultimately **CommtechMessenger/ Fusion** provides significant advantages over old systems in the following ways:

- The platform of operation is a standard Windows based server and the data is open in an SQL format;
- **CommtechMessenger/ Fusion** supports all standard messaging interfaces, such as TNPP, TAP and PABX, and each interface can be licenced in as many multiples as required;
- **CommtechMessenger/ Fusion** now also effortlessly combines paging network communication with SMS, Email, DECT phone systems and even certain radio systems, so certain users could utilise SMS and/ or Email to receive their messages in addition to paging and the sender would simple send the message as before.



General Technical Specifications:

CommtechMessenger (BasePage)/ Fusion (Part of the functions)

Feature	Ability
Recipient capacity	1,000,000 Pagers, mobile phones or DECT Handsets
Group capacity	10,000 Groups
Department capacity	10,000 Departments
Concurrent clients	10,000 Clients (per server)
Serial Port capacity	64 x RS232C Serial Ports (per server, BASEPage only)
System Architecture	Client/Server, TCP/IP Communications
PBX Port capacity	64 Ports (MAXPage only 1)
PBX Interface	2 Wire Analogue Extension (FCC, Austel Approved)
PBX Messages	100 User defined messages (MAXPage only 10)
Alarm capacity	64,000 Alarm Inputs (opto-coupled or contacts) (MAXPage only 1)
Escalation capacity	10,000 call escalations, unlimited escalation steps
Roster capacity	10,000 individual roster schedules, unlimited shifts
Reminder messages	100,000 reminder messages
High Level Interfaces	64 High Level Interfaces via TCP/IP or RS232 (Message Exchange only 3)
Outbound email	Sent via Simple Mail Transfer Protocol (SMTP)
Inbound email	Received via Simple Mail Transfer Protocol (SMTP)
Security configuration	Individually configurable on a per user basis
Paging Protocols	POCSAG CCIR #584 at 512/1200 bps Telelocator Alphanumeric Protocol (TAP, IXO, PET)
DECT Protocols	Kirk DECT SMS (Short and Long message formats) (BASEPage only)
Fire / Security / BMS Interfaces (BASEPage only)	<ul style="list-style-type: none"> • Ampac CIE-BMS/EWS • FFE Series 9000/10000 • Simplex 4100 • Vector Macroview • Citect • Honeywell BMS • Modbus • Wormald MXL/XL3 • Free Text Interface (User programmable) • Ademco (Smartlink) • CallGuard (Austco) • DigiAlert (Communication Systems) • Dukane • Gladstone (Inteltec) • Jeron • Merlon (Statewide Communications) • Peninsula Call Systems • Responder IV (Rauland-Borg) • Sedco (Inteltec) • Tunstall • Vitalcall • Wescom • Vitalcall • Zettler
Nursecall Interfaces (BASEPage only)	



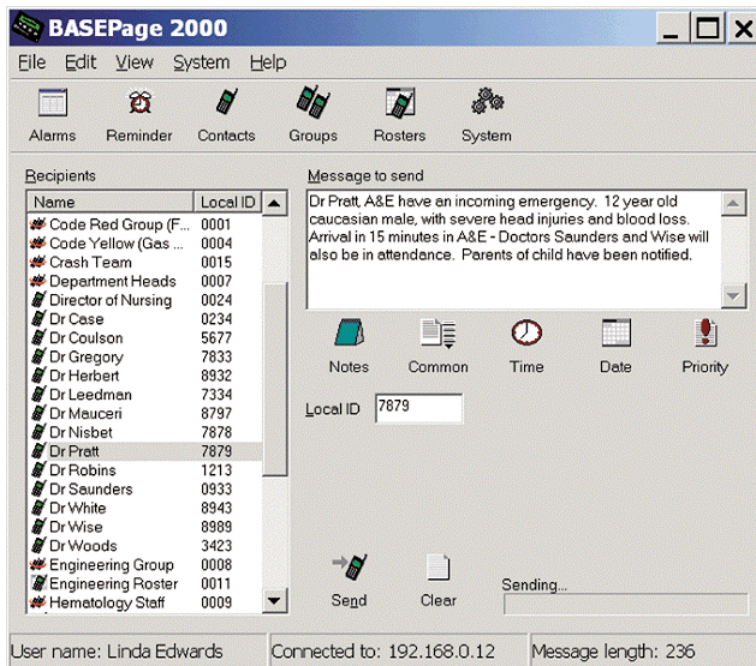
Full Feature Description Of **CommtechMessenger/ Fusion** Follows Where They Share The Most Powerful GUI Front-End Functionality Known:

Manual Dispatch of messages

Locating staff members is imperative within a hospital and, as a result, most hospitals have a centralised switchboard. Traditionally either dumb terminals or PC's running terminal emulation have been used for operator terminals. Even where this has changed with modern PABX systems, it is still hard to locate or communicate urgently with medical staff on all levels in and outside of the hospital.

CommtechMessenger/ Fusion address this issue with Windows client software that enables the telephonists PC's to be used for multiple purposes whilst easily switching between applications.

This enables every PC within the hospital to be a messaging terminal; naturally the traditional switchboard room is still supported 100%. However, with every PC being a terminal it will reduce the amount of telephone traffic within the hospital and reduce the number of operators required in a switchboard room.



Operators have access to the following facilities for message dispatch;

- Transparent access to on site and citywide wireless recipients.
- Searchable recipient list (**CommtechMessenger** acts as a telephone directory as well and with a "notes" facility on each recipient serves as instant communication of additional information about a recipient)
- Easy access is available to the notes about each recipient.
- Message history may be retrieved simply and easily.
- Messages may be flagged as a priority simply by clicking the priority button.

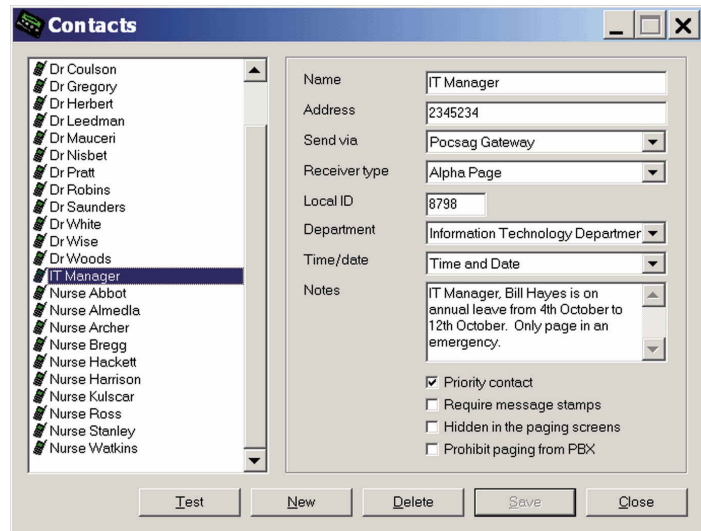
Recipient & Group Management

One of the primary benefits of **CommtechMessenger** is the ease of use for the management of recipients and groups. **CommtechMessenger** provides true device independence; enabling recipients to be a myriad of different receiving devices such as Pocsag pagers, wide area pagers (if still in use), DECT handsets, mobile phones or even email addresses.

Contact Management

CommtechMessenger makes recipient maintenance a breeze for administrators. Simply enter in the name of the recipient, their contact address and select how to send the message to them.

All operations such as new, delete and save are situated on a single screen ensuring that all operations are only one click away.

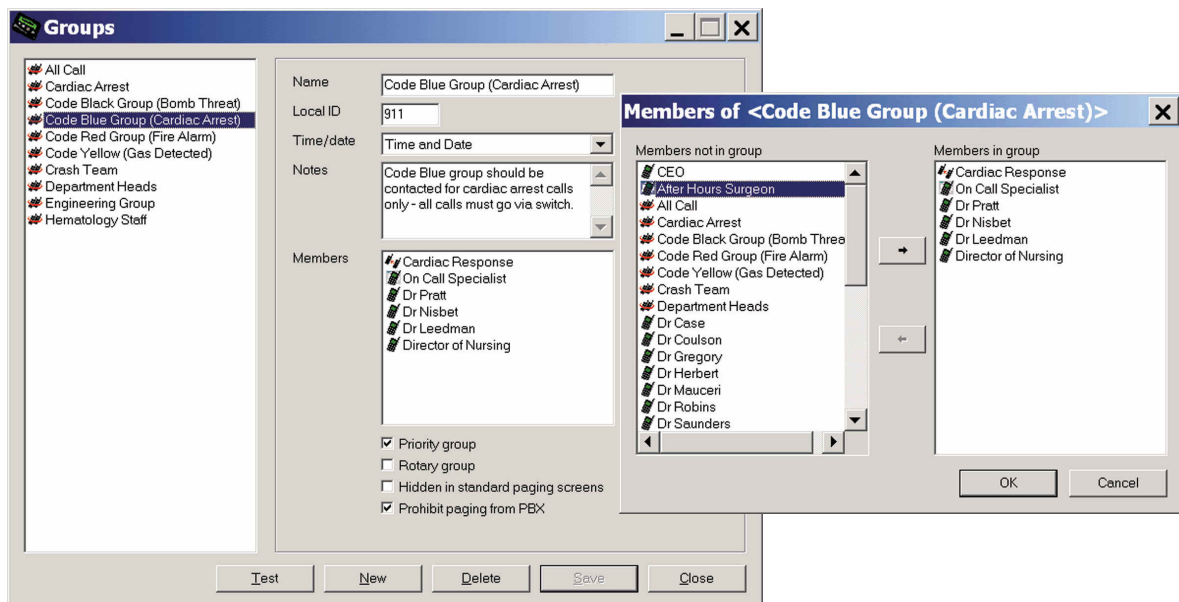


Group Management

It is often a requirement to notify more than one person at the same time. A typical example of this would be a fire alarm where, several people need to be informed simultaneously and the people being notified have different messaging media.

Groups may consist of any combination of on site pagers, DECT handsets, mobile phones or city wide pagers and even email addresses.

Adding members to a group is as simple as clicking on the 'add recipients' button and dragging the required recipients into the group.



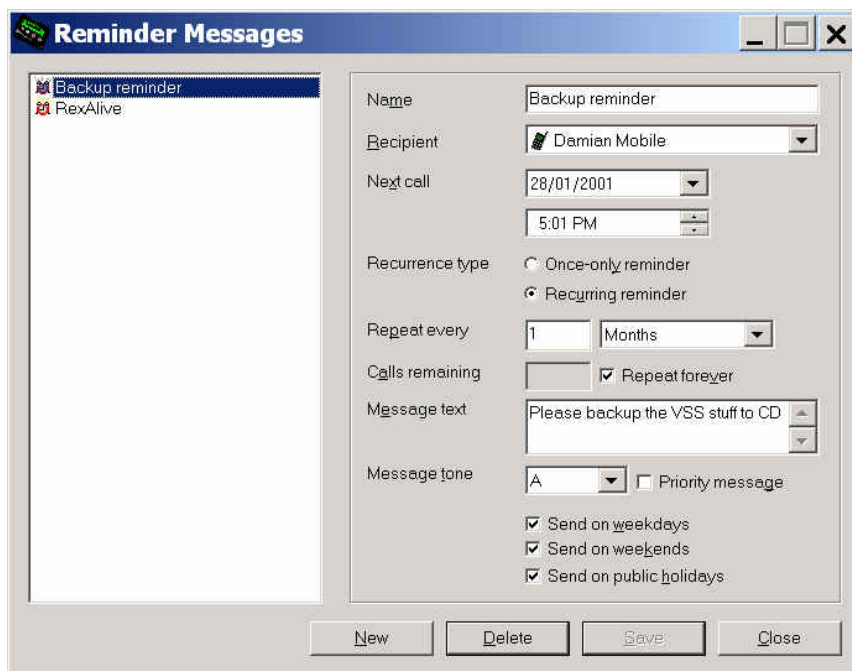
Reminder Messages and Booked Calls

Reminder paging allows the operator to enter a message that will be sent out in some future point in time.

Reminder paging has many applications within the hospital:

- Certain Areas may need to be secured at certain times (eg: medicine cabinets) – which can be effected through reminder text messages to staff or even the control of an electronic lock activated by the reminder message.
- Certain patients may require special service at times during the day (eg: medication, exercise etc) – and some may need reminders to take their medication.
- Simple appointment diary, remind staff of meetings and so forth.

A sample of the full 365 day reminder screen is seen below, where weekends and customisable public holidays may be handled uniquely.



Security (for authorized system usage)

CommtechMessenger provides sophisticated security to restrict access to particular functions within the software. Each time a client connects to the **CommtechMessenger** server they are requested to provide a user name followed by a password. The **CommtechMessenger** administrator establishes the privileges for each user (alternatively clients may log on as a guest with a predefined set of privileges). The administrator may define which menu options each individual user can access.

For example the default guest configuration might disable all menu options except logging in and out of the system. This prevents an average user from being able to modify recipients or adjust any other parameters – they can only send a message.

Another user (such as the telephonists at the call centre) might have access to adding/modifying and deleting recipients but not entitled to adjust alarms or the predetermined 'code blue' sequence. When a user logs on to the system all transactions are monitored and recorded in a searchable audit trail.

PBX Message Dispatch

The voice prompted telephone access enables staff to be contacted from any extension. You simply call up the system on the PBX extension(s) it is connected to, enter the number of the person you require, and then enter a message. **CommtechMessenger** with the **MAXPage** enables you to send predefined messages such as 'Code Blue Room 102' directly from any telephone extension with minimal key presses from the phone.

In addition staff may perform various functions such as making themselves absent or diverting their calls to another pager.



- From any telephone extension hospital staff enter in the extension number of the messaging system.
- Staff are greeted with 'Enter Recipient Number'.
- Staff type in the pager or group ID they wish to contact.
- **CommtechMessenger** responds with 'Enter message'.
- Messages may be either numeric or alphanumeric.
- **CommtechMessenger** responds with 'Message Sent'.

Additional facilities over the PBX include;

- Messages may be prioritised for emergency situations.
- Alarms may be acknowledged to prevent them from escalating.
- Tone prompts are available for non-English speaking countries.
- User-recordable voice prompts for multilingual applications.

Email Integration

Email has become the medium of choice for the business community. There is a clear need for mobile email services that staff can employ and configure to match their individual messaging needs.

CommtechMessenger is both an email client (able to send emails) and an email server (able to receive email for dispatch to mobile recipients).

CommtechMessenger may integrate into your hospital's internal email system enabling email messages to be delivered directly to recipients. The email integration operates from the industry standard SMTP (i.e. Simple Mail Transfer Protocol) enabling **CommtechMessenger** to communicate with virtually any email system.

Mobile email services take advantage of the ease with which mobile users can be reached. The service monitors a user's mailbox, detects the arrival of new email and notifies the user by sending a message to the user's phone, pager or DECT handset.

In addition, any message that is generated by **CommtechMessenger** can be easily dispatched as an email.

As well as just delivering email to recipients **CommtechMessenger** may be configured only to forward email based on a set of criteria. These criteria, amongst other parameters include;

- Only forward email between certain hours of the day to prevent email being delivered at obscure hours.
- Programmable parameters to forward to recipients (i.e. what parts of the email to forward).
- **CommtechMessenger** may also be configured only to send messages from certain people, of certain urgency or only messages that contain certain key phrases.



In addition to being able to send email messages to wireless devices **CommtechMessenger** may be configured to send any message to an email address.

Patron/ Patient/ Family Messaging

The system can also implement a facility to allow patients and or family/ visitors who need to wait for any reason, to be alerted when information/ patients etc are available. This alleviates continuous "returning to check" and frees patients and others to be in a lounge or coffee shop or even garden as the case may be to wait without being concerned to leave a theatre or reception waiting area.



Integration in Nurse Call Systems

Most are familiar with the concept of linking nurse call systems into paging. When a patient requires assistance, they press their nurse call point and the nurse is notified of their request via a vibrating pager, although mostly **static** nurse stations have been used till now, requiring staff to be located at the station or to be in the corridor outside wards.

CommtechMessenger's Nurse Call Integration enables you to establish a series of wards so that you may assign staff to service particular areas within your hospital.

Whenever a call comes in from a particular ward, **CommtechMessenger** will analyse which nurses are assigned to the area, and if they are available, **CommtechMessenger** will contact them.

Staffing levels may be altered either automatically based on a roster or manually by the staff on duty.



CommtechMessenger interfaces into all popular brands of nurse call systems (even old mimic panel systems) and provides additional functionality to these systems including; call escalation, logging of nurse call alarms, statistical analysis and intelligent distribution of calls. The system can even be used to distinguish kitchen calls from medical related calls and automatically action the appropriate staff!

Integrating the messaging system with a nurse call system enables all calls to be sent to the appropriate nursing staff.

Special features of the nurse call integration include:

- Assignment of call points to 'roster schedules'. Roster schedules determine which staff are contacted depending on the time of the call.
- In built ability for 'swinging wards' and call escalation.
- Rotary groups evenly distribute the nurse call workload.
- All nurse call alarms are logged at one central location for reporting.
- 'Non-Intelligent' nurse call systems can enjoy the full suite of facilities by connecting into AIM Boards.
- In built priority system to ensure timely delivery of messages.
- Nurse calls may be relayed to alphanumeric corridor displays.



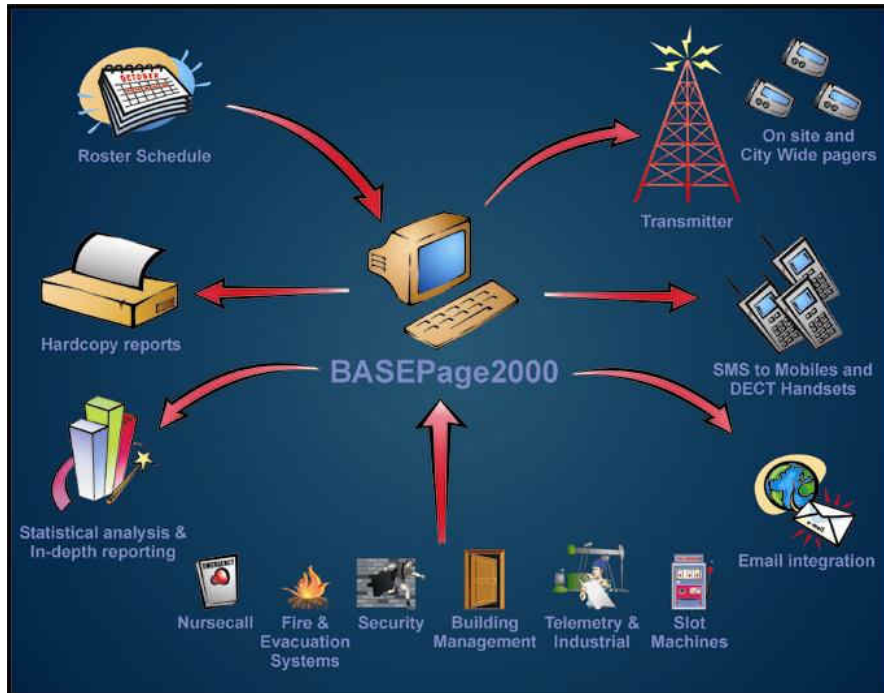
Remote Terminals enables the local allocation of nurses to call points (at a ward level).

Interfacing in Building Management, Security and Fire Alarms

CommtechMessenger can monitor a diverse range of alarms such as door alarms, duress systems, fire alarms and security systems. When an alarm is triggered, a message describing the alarm, its location, and any other required details, will be instantly sent to hospital personnel.

CommtechMessenger supports a full suite of rostering capabilities that enables the system to determine which staff to page depending on what time of the day the alarm was triggered.

The priority queuing system ensures critical alarms are transmitted first ensuring prompt delivery of calls.

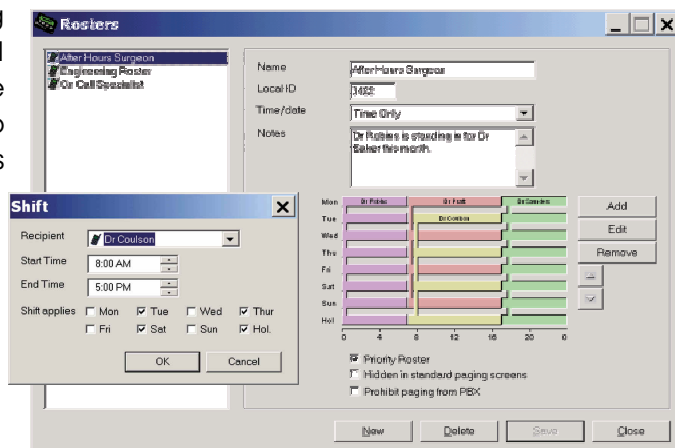


The diagram above, featured earlier, depicts at the bottom the wide range of non-standard systems to which **CommtechMessenger** can interface, and regardless of the other systems' non-standard interfaces.

Rostering Management

The rostering facility within CommtechMessenger enables different staff members to be contacted depending on what time of the day and which day of the week a call is placed to them. The rostering system is identical to traditional manual rostering. Rosters are highlighted in various colours so you can quickly see who is rostered on for a particular shift.

When a call is placed to a roster (regardless of the origin) CommtechMessenger looks up which staff are on the roster schedule and then contacts all staff that are assigned to the shift.

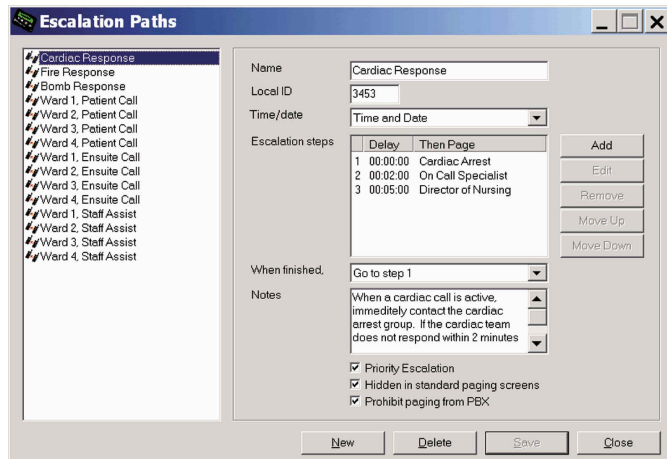


Escalation Paths

Occasionally it is a requirement that a call must unconditionally be answered - if it is not then it could mean the difference between life and death.

Under these circumstances CommtechMessenger employs escalation management and priority queuing. The escalation management enables a sequence of staff to be contacted, at varying time intervals, until the call is answered.

In addition, the priority system ensures that the call is sent immediately, by moving it to the front of the queue.



Reporting and Statistical Analysis

If there were one single 'buzz' word that has governed the 90s it would have to be accountability.

Paging is one of the primary forms of communication within your hospital - it is essential to be able to review and examine the paging traffic on your system.

Some of the reporting facilities available in **CommtechMessenger** enable management to:

- Review response times to alarms.
- Solve disputes on when and to whom messages were sent.
- Track messages generated from particular sources - you can see which departments are busy.
- In the event of litigation you can easily review what happened during a particular time period.
- On screen graphical analysis allows management to review peak periods within the hospital.

City Wide Paging

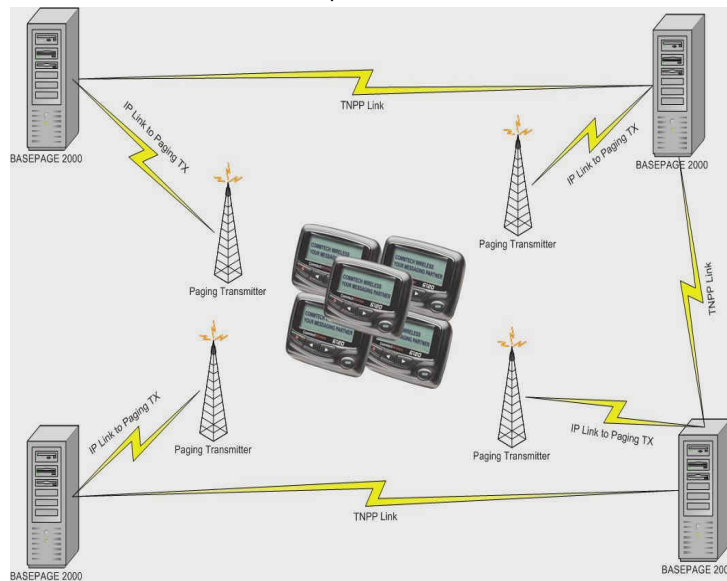
CommtechMessenger may be integrated with other paging networks on other sites or may use a single high power or multiple transmitters to provide communication over wide areas to enable messages to be sent much further than the site where the system is based. In addition, messages may also be sent to mobile phones.

Inter System Networking

CommtechMessenger may also communicate to **CommtechMessenger** systems located at other sites to provide transparent 'roaming' from site to site.

Features & Benefits include:

- All of **CommtechMessenger's** facilities may be fully integrated into city wide paging and paging at remote sites.
- Inter-Site communication enables **CommtechMessenger** systems to contact 'roaming' staff. Eg travelling specialists or Engineers servicing multiple hospitals.
- High Power Transmitters and multiple transmitters may be connected to **CommtechMessenger** allowing private wide area networks to be established, such as depicted below:



Message Receivers

DECT Handsets

Description

The KIRK DECT handsets, available in standard and head-set capable versions are the preferred DECT system hand-sets, though others are also compatible. The KIRK DECT platforms are compatible with other **CommtechMessenger**, as are most other DECT Systems. There are several unique features that make sense to use DECT phones with **CommtechMessenger**, especially where a DECT solution is already deployed. The key advantages are listed below.

Features



- Only one messaging receiver is carried, which serves a dual purpose, namely direct extension voice communication and direct messaging.
- The DECT handset becomes more utilized since it can receive notification of emails, message alerts for immediate action and notification of alarms and escalations.
- Direct messaging to the person carrying the DECT handset is also possible
- Using the **CommtechMessenger** Reminder facility, reminders can be sent to the phone.
- Messages can be diverted to a mobile phone and/ or email when the DECT phone user is no longer on site (absent status must be set before leaving, but can be don't via

the DECT phone)

Benefits

- Can be programmed over the air, saving time for maintenance staff
- Priority calls can be programmed to sound the alert until a button is pressed
- Great for staff who need text messages on the go

7900 Alphanumeric Page Receiver

Description

The 7900 pager is the preferred pager unit. There are several unique features that will ensure long-term trouble free operation. The key elements are listed below.

Features

- Duplicate message detection and rejection
- English, Italian, Spanish, French German and Russian languages supported.
- Over the air, on board or PC programmable
- 2 line, 36 character display
- Vibrate override for priority calls
- 60 Message memory
- 6 codes
- Local contrast adjustment
- 4 alert tones, 4 melodies
- 500 characters per message



- 1400 hours battery life
- Tough, high impact case
- Light weight
- Easy to read backlit display
- Continued service and spares availability through Commtech's ownership of the manufacturing facility.

Benefits

- Can be programmed over the air, saving time for maintenance staff
- Priority calls can be programmed to sound the alert until a button is pressed
- Great for staff who need text messages on the go

4140

Description

A lower cost solution to the 6120 is the numeric 4140. The 4140 is a low cost, simple to use numeric pager.

Features

- Tough, high impact case
- Light weight
- Easy to read 12 character backlit display
- 20 Message memory of up to 20 characters
- 4 Cap codes
- Local contrast adjustment
- 4 alert tones, 8 melodies
- 800 hours battery life
- Over the air, on board or PC programmable
- Automatic duplicate message detection and rejection



Benefits

- Suitable for staff who generally only need to be notified of a number, such as an extension to ring, a room to service or a table to attend to.
- Belt clip, top down display allows reading of the pager without taking it off

Patron Pager

Description

The patron pager is a coaster pager designed for use with clients who are left waiting. The coaster allows the client to be directed toward the bar or restaurants to await their calling when your staff is ready for them. This not only increases efficiency and customer satisfaction with your hotel services, but could result in extra revenues with patrons now waiting at the bar.

Features

- 4 cap codes
- Can operate on full paging spectrum of frequencies
- Rechargeable battery charges whilst the coaster is sitting on a charging base with up to 10 coasters per charger
- Unit self tests every time it is removed from the charging stack to ensure 100% functionality
- Can be programmed via PC or over the air



- 3 alert modes, vibrate, flash and/or beep
- Enclosed in a durable, high impact casing ready to withstand daily punishment

Benefits

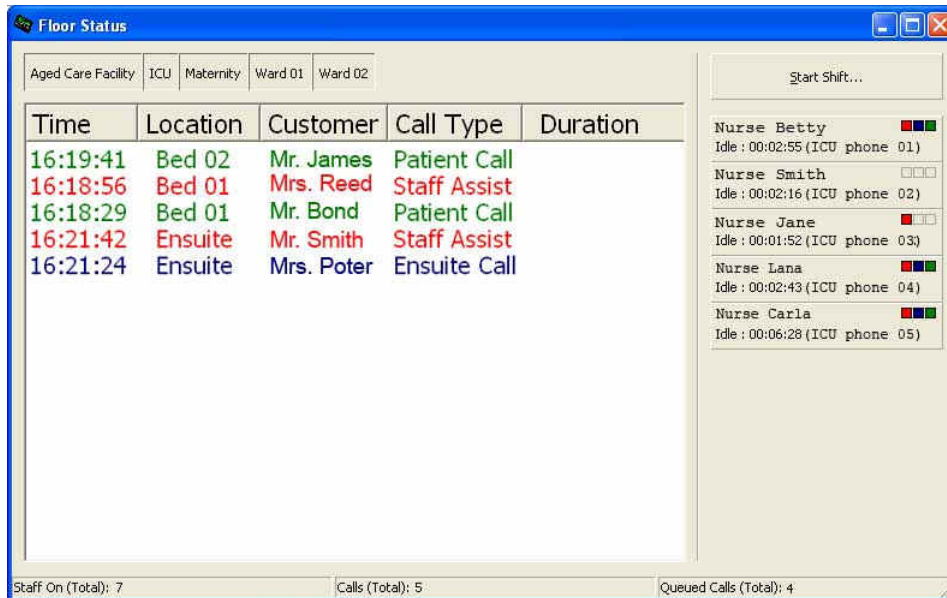
- Can be paged/activated by any **CommtechMessenger** terminal
- Ability to attach advertising

Conclusions

- **CommtechMessenger** with **MAXPage** (which is a more cost effective upgradable entry solution) are universal messaging platforms to enable improved communications between all hospital staff and medical practitioners;
- Messaging can be initiated from any source practical such as phone, PC, panic button, wireless call button, SMS or email;
- Actions of all staff performing the work which delivers the hospital's service (and distinguishes it from other hospitals) can be measured, rated and statistically analysed to enable improved service delivery and ultimately patient (customer) satisfaction;
- Escalations, Rosters and Reminders ensure that critical requirements are carried out and leave nothing to chance/ human error as forgetting or ignoring calls or requirements generated are not possible without an escalation or record of the message.
- Cost savings in communication become significant by eliminating the ardent use of cellular calls to locate staff and/ or doctors which can also take a number of calls to achieve, notwithstanding that a message is an automatic log of communication where a call is not. Cellular calls are limited to instances where a discussion is necessary, which may be triggered by a message in any event.
- Efficiency in management of staff, measurement of customer service and improved communication will impact on client satisfaction and ultimately return on investment.
- Large and mid sized hospitals world-wide are benefiting from advanced Nurse call and additional integration of messaging platforms, which have not been freely available in Africa before.

Details of Solutions - CommtechMessenger

- **CommtechMessenger** will provide the ADVANCED NURSE CALL FACILITY which is an OPTION to extend the functionality of Fusion and provides all the functionality and more (through its custom interfaces) as outlined in this proposal. Furthermore with interface license upgrades one can add interfaces to the solution thereby increasing the power and functionality of the solution as the needs of a client grow. Therefore the **CommtechMessenger** solution provides a flexible and powerful solution, Plus allows the implementation of ADVANCED Nurse Call interface.
- The Diagram below depicts the Advanced Nurse Call interface Available to implement **CommtechMessenger** in association with Fusion.



APPENDIX

Examples of industry specific applications where wireless communication solutions similar to the one proposed in this document have been deployed.

The list of examples demonstrates that reliance has successfully been placed on the technology which **Message Systems** distributes in Africa, and how reliance may be placed on the solution proposed for your business, in which improved communication is key to its success.

MEDICAL/ HOSPITAL

There is no doubt that the swift and confirmed contact of staff is of the utmost importance to any hospital. The effectiveness of a facility's wireless messaging technology can mean life or death for its patients.

Message Systems' range of solutions suits the needs of hospitals and healthcare facilities worldwide – no matter their size. Our wireless messaging products integrate seamlessly with a vast array of nurse call and other third-party healthcare communication and alarm systems. No other system has been tried and tested to this extent worldwide and has the expansion and integration capability.

Just some of the hospital sites with a solution include;

- Balmain Hospital
- Bulli Hospital
- Blacktown Hospital
- Coonamble Hospital
- Goulburn Hospital
- Moruya Hospital
- Northam Hospital
- Kimberley Hospital
- Pingelly Hospital
- Darwin Private Hospital
- Gisborne Hospital
- Oamuru Hospital
- Mackay Base Hospital
- Whyalla Hospital
- Hume RFS
- Dannevirke Hospital

EMERGENCY

The importance of the work carried out by Emergency Services (EMS) agencies calls for the very best and most reliable wireless messaging technology. When time is measured in seconds and every second counts, there is no margin for error. For emergency services agencies using cellular phones, the loss of a network can spell catastrophe.

Wireless messaging is the simplest, most cost-efficient and reliable way for EMS and Rural Fire Services (RFS) officers to stay in touch with key staff members. **Message Systems** provides a wide range of messaging products of superior quality and versatility to provide the Emergency Services industries with comprehensive communications solutions.

Emergency Sites world-wide include:

- Baulkham Hills RFS
- Brewarrina RFS
- Campbelltown RFS
- Cooktown RFS

- Camden RFS
- Hawksbury RFS
- Liverpool RFS
- Narrabri RFS
- Dumaresq RFS
- Eurobodella RFS
- Wollongong RFS
- Hume RFS

AGED CARE

In any assisted-living facility, the ability to reach staff promptly and with certainty is of the utmost importance. Effective wireless messaging technology can make a world of difference; even, in the case of infirm residents, life or death.

That is why **Message Systems** distributes a range of solutions to suit the needs of aged care and healthcare facilities worldwide – specially tailored solutions for the industry-specific requirements of the world’s most-respected assisted living facilities. Facilities that are already benefiting from a **Message Systems** solution include:

- Bondi Astra Ret. Village, NSW.
- Wesley Gardens, NSW.
- Rendell on Reed Rest Home, NZ.
- Carinya Hostel, QLD.
- Country Woman’s Association, QLD.
- Adelaide City Mission, SA.
- Barossa Valley Nursing Home, SA.
- Glenview Nursing Home, TAS.
- Queen Victoria Nursing Home, TAS.
- Cassa Elda Vaccari Hostel, VIC.
- Asc. For the Blind Hostel, WA.
- RSL War Veterans Home, WA.

CASINOS and CLUBS

As a distributor of wireless messaging software and related products for the Gaming and other industries, through agents in this industry, **Message Systems** has solutions that make a substantial difference to the bottom line of any casino.

Message Systems’ flagship product **BASEPage** integrates all a casino's messaging inputs (such as slot machines, alarms, manual paging, building maintenance systems, PBX and so on) and dispatches messages through a wide variety of methods such as pagers, SMS, email and DECT handsets.

These solutions typically **handle tens of thousands of messages daily** and demonstrate the **reliability** and **robustness** of our solutions, apart from the hospitals and emergency service sites already mentioned, and therefore **provide new clients confidence!**

Some of the casinos and clubs already experiencing increased profits and efficiency include;

- Monte Casino, South Africa
- Casino Arizona, USA.
- Auckland Casino, NZ
- Harbord Diggers RSL Club, NSW.
- Parramatta Leagues Club, NSW.
- Conrad Jupiters Casino, QLD.

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- Burswood Casino, AUS.
 - Campbellton RSL, ACT.
 - City of Sydney RSL Club, NSW.
 - Conrad Treasury Casino, QLD.
 - Sheraton Townsville, QLD.
 - Cessnock Rugby League Club, NSW.

COMMERCIAL

Schools, shopping complexes, government agencies and mine sites, though diverse in operational nature, all benefit from the freedom and versatility provided by a wireless communications solution.

Message Systems provides messaging infrastructure, including pagers, software and DECT systems to a great number of commercial and public interests in these diverse fields.

Some of these companies and agencies include;

- Telecom Monitoring, NSW.
- American Express, NSW
- Monash University, NSW
- Uncle Tobys Company, NSW.
- SA Court House, SA.
- Alexander State Library, WA.
- Woodvale SHS, WA.
- Deer Park Shopping Center, VIC.
- Police Forensic Science Center, VIC.
- Hamersley Iron, WA.
- Argyle Diamonds, WA.
- SA Railways, SA.

HOTEL/ RESORT

The successful management of a hotel entails the balancing of a number of disparate tasks. From keeping up with staff movements, turning off lights and answering calls for room service, hotel management covers a wide variety of skill sets and duties.

Message Systems 's sophisticated message exchange platforms and technology integrate PABX and email systems with a wide range of paging and alarm monitoring systems. Revolutionary messaging system is already giving many hotels an advantage over others by helping them provide superior customer service.

- Pezula Hotel, WC, RSA
- Bay Hotel, CT, RSA
- Michelangelo, JHB, RSA
- JW Marriot Hotel, Indonesia
- Marriott Hotel, QLD.
- Le Meridien, BALI.
- Regent Hotel, FIJI.
- Vineyard Hotel, CT, RSA
- Alpine Heath Resort, RSA
- Southern Sun, various, RSA
- Radisson Hotel Gold Coast, QLD.
- Ramada Gold Coast Hotel, QLD.
- The Pine Resort, QLD.
- Intercontinental Hotel, NSW.

- Hilton Hotel, NSW.
- Hard Rock Hotel, BALI.
- Hilton Hotel, NSW
- Sydney Hilton Hotel, NSW.
- Esplanade Hotel, WA.
- Hyatt Hotel, WA.
- Hayman Island Resort, QLD.
- PT Semen Nusantara Cilacap, JAVA.

INDUSTRIAL

Safety is of the utmost importance in any industrial situation. The reliable monitoring of alarm events and the quick and dependable transmission of messages on an industrial site ensures the safety of people and equipment in often volatile environments.

Paging technology and alarm interface modules provided by **Message Systems** are employed in various mission critical applications within industrial environments. Our world-class products help protect life and property as well as provide a high level of efficiency to many companies, worldwide.

Industrial companies currently utilising **Message Systems** technologies include;

- Corinthian Industries, NSW.
- Coca Cola, QLD.
- Western Power, WA.
- BHP Groote Eylandt, NT.
- Osborne Mining, QLD.
- BHP, SA.
- BHP Newman, WA.
- Norseman Gold Mine, WA.
- Silver Swan Nickel Mine, WA.
- Sanitarium Food Products, NSW.
- Gladstone Power Station, QLD.
- Goodman Fielders, QLD.
- Wiluna Gold Mine, WA.
- Hunter River Gold Mine, NSW.