CASE STUDY





UTEK the CommtechWireless partner in Australia developed an Alarm Monitoring and Paging System deployed on 8 oil rigs deployed in Victoria – Australia. Utilizing CommtechMessenger messaging platform together with Fusion hardware they successfully created a solution that would manage all the communications required by oil rig management. The following document is the resulting functional specification.



ALARM MONITORING & PAGING SYSTEM FUNCTIONAL DESCRIPTION 2007

This document summarises the functional description and features provided by the complete Alarm Monitoring Paging System (AMPS) installation.



The functions and features are presented to the user as a graphical display with a tabbed menu, push buttons and help instructions. This ensures simple and quick access to the numerous functions.

TABBED MENU - FOR ACCESS TO ALL FEATURES & OPTIONS

CommtechMessenger		
<u>File E</u> dit <u>V</u> iew <u>G</u> aming <u>S</u> tatistics <u>I</u> nterfaces <u>H</u> elp		
Clients Alarms Reminder Contacts Groups S	Schedules Settings	
<u>R</u> ecipients	Message to send	
Name Local ID Bill 002 Jonny 001 Jonny Data Router 090 Jonny mail 007 Lutti 003 Pager 004 Group 1 101 Sched 01 201 V Escalation 1 301	Alarm 314: DverPressure on CM083	X
	Sending Se <u>n</u> d Clear	
	Message length: 32	

COMMTECH MESSENGER – CONFIGURATION SCREEN

Tabbed Menu Structure

ALARM PAGING

- SEND ALARMS AND NORMALS
- SEND ALARMS ONLY
- PAGING OFF

ALARM VIEW

- ALARM VIEW
- RESTORE SCREEN

DCS LOG

- OPEN DCS LOG
- DCS LOG TO CD
- DCS LOG TO DVD

HELP

- AMPS HELP
- PAGER HELP

ALARM PAGING

Data from the Process Control System (Bailey, Honeywell, etc) is continually scanned to identify alarm messages. When alarm messages are detected the text is captured and formatted for correct display on the pager then sent via the paging transmitter.

FEATURES:

- Filters data so that only the required information is sent to the pager
- Structures message for logical layout on pager screen
- System alarm time sent with message
- Stores message history

USER SELECTABLE PAGER SYSTEM FUNCTIONALITY

To limit the sending of un-wanted messages to the pager there are 3 different modes that can be easily selected. Selecting any of these does not change any other system functions. The Alarm Log capturing and the Alarm Display still continue in any of the 3 paging modes.

"Send Alarms & Normals"

This mode will send the "Alarm Activation" Message as well as the "Return to Normal" Message to the pager.

"Send Alarms Only"

This mode has different filtering parameters and detects "Return to Normal" alarm messages and does not send them to the pager. This reduces the number of messages being sent for those operators not requiring the "Return to Normal" alarm messages.

"PAGING OFF"

This mode disables sending of any information to the pager. This may be useful during times such as during a major start up when many alarms will be triggered so that they are not sent. This can also be used to stop (interrupt) a series of unwanted messages as it occurs.

AMPS 2006
Alarm Paging Alarm View DCS Log Help
PAGING CONTROL - Press a button to select the type of Alarm Messages that are sent to the pager. Loading the new configuration takes several seconds as indicated by the progress bar. A pop-up text box will confirm when it is done. GREEN text indicates the current active selection.
SEND ALARMS & "Alarm Activations" and "Return to Normal" Alarms will be sent to the Pager
SEND ALARMS ONLY Only "Alarm Activations" will be sent to the pager
PAGING OFF PAGING OFF - No Alarm messages will be sent to the pager
UTEK - Communication Management Services 81-83 Macarthur Street, Sale, 3859 Change mode progress. Phone: 03 5144 7500

ALARM PAGING MENU – TO SET REQUIRED PAGING MODE

CommtechMessenger Elle Edit View Gaming Statistics	Interfaces Help		
Clients Alarms Reminder Co	Address Schedules Settings	Date Priority	

PAGER SETUP MENU – TO SETUP INDIVIDUAL PAGERS

DATA LOG

Captures the serial data from the Control System (Bailey, Honeywell, etc) and writes it to a log file. This can be accessed to analyse long-term alarm history or to find cause of recent problems or shutdowns.

The log file is stored on the system in a hidden location to prevent it being deleted or changed. When it is opened as a text file, it is an automatically generated copy rather than the original that is opened.

des lag Word?	44									665
The Edit Weve Droter	t Format Help									
ALM 17:00:18	0001_88	90% LEL	ENERGIACY	ADEA L_1	EAST OF VIOL	1.39	404 LEL		510000000000	
ALM 17100118	BAG_H	ALADM	ихон	MAZARDOUS	ATBOOFHERE	84	ALARM		210000000000	
ACK 17:00:14	BAG_H	ALADM	HIGH	NATARD-008	ATBORPHERS.	24			3100000000	
ACK 17(00)14	GOO3_HH	404 LEL	ENERGIACY	ADEA L_1	EAST OF VIOL	CRE.		3)10000000000	
ACK 17:00124	G001_H	20% LEL	ERENGINCY	ADEA L_1	EAST OF VIOL	(#))			3100000000	
DALM 16:52:14	G001_I	IDOLATED	LOW	AREA L_1	EAST OF VIC	41.0	INCLATED		: 10000000000	
ALM 16:53:44	LARB_N752	82.82	HIGH	V750 FLARE	DORDS LEVEL	10	82 82		210000000000000000000000000000000000000	
ALM 16:33144	UA_N940A	DEUTD-OWN	NICH	0940 ELECT	GENERATOR	12	INTERNET OF		210000000000000000000000000000000000000	
ALM 26:33144	EA_N940A	DRUTD-OWN	FOR	0960 B/B	FROB CCF	10	DESTROYING AND		210000000000000000000000000000000000000	
ALR 16:53:44	UA_N940C	THIPPED	нтон	0940 B/GEAS	PROTECTION	10	TRIPPED		210000000000	
ALR 16:53:44	¥AL_1976	LOW	нтон	GENY DIESES	SUPPLY PRESS		LOW		21000000000	
ALM 16:53:44	TA_OPHOCE	OPEN	нтен	0960 OEN CO	T BREAKER	50	OFTEN		210000000000	
ALR 16:53:44	TA_0970CB	OPEN	RIGH	0970 GEN CO	T BREAKER	10	09838		2100000000000	
ALM 56:57144	WA_0980CB	OPION	NIGH	0960 OEN CO	T BREAKER	10	OPEN		\$10000000000	
ALM 56:53:44	WA_0990CB	OPIEN	NIGH	OPPO OEN CO	T BREAKER	100	OPEN		2100000000000	
ALM 16:53144	84_N9308	BRUTDOWN	LOW	CORD LOCAL	SHUTDOWN	392)	11811TD-0404		210000000000000000000000000000000000000	
ALM 16:53144	HA_NOG1_F	FAULT	NICH	BORN DEER	CCP.	380	FAULT		210000000000000000000000000000000000000	
RTH 17:00:09	0001_2N	PVLO	0-000 NICH	AREA L_1	EAST OF VIOL	98.3	\$00.000		210000000000000000000000000000000000000	
ALM 17:00:09	-5001_2N	BART.	0.000 EMERSINCY	AREA L_1	EAST OF VIO		\$00.000		210000000000	
ACR 17:00:15	G001_IN	BART	EREPSIDEN	AREA L_1	EAST OF VIOL	- 10		1	310000000000000000000000000000000000000	
ALR 17:00:18	G001_8	20% LEL	EMERSINCY	AREA L_I	EAST OF VIOL	-	10% LEL		2100000000000	
ALR 17:00:18	0001_88	40% LEL	EREP-RICY	AREA L_I	EAST OF VIOL	- 10	40% LEL		210000000000000000000000000000000000000	
ALR 17:00:10	BAG_R	ALASH	RIGH	HATARDODS	ATBOSPHERE		ALAPS		2100000000000	
ACR 17:00:24	BAG_B	AL ASE	RIGH	BATABDODE	ATROSPHERE	24		1	3100000000000	
ACR 17:00:24	G001_HH	40% LEL	ERENGINCY	APER L_I	EAST OF VIOL	48.6		1	310000000000	
ACK 17:00:24	G001_H	204 LEL	ENERGICY	AREA L_I	EAST OF VTO	5 52		L	310000000000	
		-								
or teels, press P3.	ALC: NOT THE OWNER.	Shine and shares and shares							No. And Address of the International Contraction of the International Contractional Contractionactional Contractiona	NU

DATA LOG - TYPICAL LOG FILE

AMPS 2006	
Alarm Paging Alarm Viev	N DCS Log Help
UTEK DCS The NOT COMMUNICATION MANAGEMENT SERVICES	LOG FILE - This is to simplify basic management of the DCS log file. file can be opened for editing and saving and/or burning to a CD/DVD. E - The original log file will remain un-changed as it is automatically copied re any editing or changes can be made.
OPEN DCS LOG	Opens an editable copy of the DCS log in WordPad. Use "Save As" with a different file name to prevent it being overwritten with new data next time this is run
DCS LOG to CD	Opens CD burning program ready to save a copy of the DCS log to a blank CD
DCS LOG to DVD	Opens DVD burning program ready to save a copy of the DCS log to a blank DVD
	UTEK - Communication Management Services 81-83 Macarthur Street, Sale, 3850 Phone: 03 5144 7500

FEATURES:

- Captures all messages
- Captures data as it happens
- Writes to text file for easy viewing or import into spreadsheet, etc
- Runs as "Windows System Service" to ensure reliable operation
- Starts automatically on boot-up
- Export to CD/DVD

ALARM SCREEN VIEW IN CONTROL ROOM

This provides an on screen display in the Control Room of the information & Alarm messages from the Control System (Bailey, Honeywell, etc). This continually updates and scrolls as new information arrives. After a total shutdown this screen will display as soon as the PC has rebooted. This may provide valuable information about the cause of the shutdown even if the control system is down. This information may be used so that a successful re-starts can be done with the problem identified and isolated, etc.

FEATURES:

- Display starts automatically on boot-up
- Displays history of previous information at start-up
- Scroll up/down if mouse & keyboard connected
- Accurately follows contents of log file
- Screen view and configuration restored by on screen icon
- Different colors for different information.

34.5.3 (RL key 21 PL 2 NB	E Heretter		- U. E.
NUK 10154110	COOLT	ASOLATED DOW AREA CL EAST OF V/OV IP	
16:57:57	US 26	LON DRIVER 000 SLOT 000 CHD REG 0284 PRIM -000005 SECD 02	6 001#
RTN 17:00:09	0001_IN	PVLO 0,000 HEGH AREA L1 EAST OF V700 SD 100.	000
ATN 17:00:09	0001_IN	PVHI 0.000 EMERGINCY AREA LL EAST OF V700 SD 100.	000
ACK 17:00:15	G001_IN	PVHE EHERGNCY AREA LL EA	
ALM 16:53:48	6116_HF	HE FAULT HIGH AREA L_2 WELLHEAD SO HE FA	ULT
RTN 16:53:48	G117_HF	HE FAULT HANNES HEAT TO THE FAULT SD HE FA	ULT
ALM 16:53:48	6118_HF	He FAULT ISBATCH TENERSTERNES	ULT
ALM 16:54:14	GOOL_IN	PVLO TETEL and L1 EAST OF V700 SD - 25.	000
ACK 16:54:16	0001_IN	PVLD SHITTEN UNITED LI EAST OF V700 SD	
ACK 16:54:16	6001_1	ISOLATE EAST OF V700 IP	
36:57:57	US 26	MEG 0284 PRIN -000005 SECD 02	6 001F
RTN 17:00:09	0001_IN	PVLD _1 EAST OF V700 SD 100.	000
NTN 17:00:09	6001_IN	PVHI AM THAN Meetly Meetland 1 EAST OF V700 SD 100.	000
ACK 17:00:15	5001_IN	PVNG Desparation paigner/Car - C _1 EA	
ALN 16:53:48	6116_HF	HN FAULT P	ULT
NTN 16:53:48	0117_HF	He FAUL Classifier Cheerteen Class Class _2 HELLHEAD SD He FA	ULT.
ALM 16:53:48	G118_HF	HE FAULT CHILD SD HIN FA	ULT
ALM 16:54:14	0001_1N	PVLO 0,000 HEGH AREA L_1 EAST OF V700 SD - 25.	000
ACK 16:54:16	GOOL_IN	PVLO HIGH AREA L1 EAST OF V700 SD	
ACK 16:54:16	6001_I	ISOLATED LON AREA LL EAST OF V700 IP	
16:57:57	US 26	LON DRIVER 000 SLOT 000 CHD REG 0284 PRIN -000005 SECD 02	6 001F
RTN 17:00:09	6001_IN	PVLD 0.000 HZGH AREA L_I EAST OF V700 SD 100.	000
RTN 17:00:09	GOOL IN	PHE 0.000 ENERGICY AREA LL EAST OF V700 SD 100.	000
ACK 17:00:15	6001_IN	PVHI ENERGNCY AREA L_1 EA	-
			100

Red = SHUTDN Green = NORMAL Blue = Other Dated Alarm/message lines Light Grey =Comment/ information lines

ALARM SCREEN VIEW - WITH "TEXT SEARCH" FEATURE OPEN

AMPS 2006
Alarm Paging Alarm View DCS Log Help
UTER ALARM VIEW - This screen shows alarm & other information from the DCS console and is continually updated. The text is colour highlighted and may be changed for easy recognition of different alarm types or to assist with finding particular events. The 'Restore Screen' button will restore the screen to all original settings.
ALARM VIEW Starts "ALARM VIEW" program
RESTORE SCREEN Restores all default settings (colours, file, font etc.)
UTEK - Communication Management Services 81-83 Macarthur Street, Sale, 3850 Phone: 03 5144 7500

ALARM VIEW MENU - TO VIEW OR RESTORE

Text Search Feature.

The operator may use the software to highlight specific information. One default search method using black on white has been pre-defined for ease of use.

CD/DVD WRITER

CD/DVD Writer and software to enable easy copying of the log file for archive or on-shore data analysis.

FEATURES

- CD/DVD RW (High speed)
- CD/DVD Software
- Lockable access to drive

HELP FILES

Help files are included to assist with all aspects of the system and pager operation.

AMPS 2006		
Alarm Paging Alarm Vie	w DCS Log Help	
UTEK COMMUNICATION MANAGEMENT SERVICES	P - Opens documents to assist with system operation	
AMPS HELP	Opens a PDF document explaining the functionality and operation of the Alarm Monitoring & Paging System (AMPS)	
PAGER HELP	Opens a PDF document showing instructions for the pager	
	UTEK - Communication Managemer 81-83 Macarthur Street Phone: 0	nt Services , Sale, 3850 3 5144 7500

HELP MENU – TO VIEW HELP FILES

Press the menu buttons to open either PDF help document

- Alarm Monitoring Paging System (AMPS)
- Pager Instructions

REMOTE SCREEN/KB/MOUSE

KVM extender kit (dual port) will be used to provide remote screen viewing and keyboard/mouse function in the control room. The flat LCD screen may be wall or desk mounted and the keyboard/mouse plugged in only as required. An additional port is available at the PC end for configuration and maintenance purposes.

FEATURES:

- Wall mountable screen
- Keyboard & mouse not required for normal operation
- Spare Screen, keyboard & mouse port at PC
- Extender kit allows up to 45 metres across CAT 5 cable

Contact Details:





Tel Numbers:

+27 (0) 83 375 0023 (CT Office) Jonny Fantozzi +27 (0) 11 454 4470 (JHBOffice Main No) Quentin Daffarn +27 (0) 83 628 8184 (Mobile Preferred) (0) 86 50 33 969 (Email Fax Direct) +27 (0) 11 454 2199 (JHB Fax No/ Intl Fax)