WebWayOne Ltd.

Guidance on the specification of an

Alarm Transmission System

ATS Specification

Introduction

Alarm systems are made up of a number of sophisticated and complex components, their purpose to deter, protect and alert those responsible for the system.

The Fire and Security industry (and insurers) recognise that Bells only systems, whilst a deterrent, are rarely successful in generating a response from anyone when they are activated. Remote monitoring using an Alarm Receiving Centre (ARC) is the most effective method of dealing with alarm activations and ensuring that the appropriate response is despatched.

But how do we achieve alarm transmission from the protected premises and the ARC? Can we be sure that when the system is activated, the alarm will be transmitted and received? Can we detect whether a potential attacker has cut the telecommunications lines into the premises or tried to jam the mobile network, and how quickly can we be alerted?

All of these and more can be achieved through an effective Alarm Transmission System. The challenge is to provide a cost effective solution to the end user that is based on reliable networks whilst providing a monitoring solution that reflects both customer expectations and risk.

Alarm Transmission Systems (ATS) are designed to transmit critical alarm data across telecommunications networks from a protected premise to an Alarm Receiving Centre (ARC). Transmission of critical alarm data requires a stable and predictable telecommunications network to provide confidence that an alarm event will be successfully received and processed by the ARC.

Dual path ATS's have dramatically reduced the number of false alarm activations, combining a fixed line Alarm Transmission Path (ATP) with a radio based ATP such as GPRS/3G as a back-up.

This guide concentrates on the selection of a single or paired networks available for alarm transmission that are most suited to the application and risk.

Broadband (IP, ADSL)
Radio (mobile data, 2G, Edge, 3G)
PSTN (analogue telephone lines)

Functionality of the ATS will include a network monitoring capability that will identify either: -

a.   A local "physical" disconnection of the SPT from the network (from inside the protected premises).

Disconnection of the cable from a telephone line
Disconnection of the cable or loss of Wifi to the router
Jamming the GSM radio network

b. A disruption of the telecommunications network between the protected premises to the ARC (external to the premises)

Regional or National telecommunications outage (All networks covered)

ATS Specification

Understanding the role of the ATS allows the specifier to focus on network selection most suitable to the application and risk. The guide has four sections to aid in the selection process.

Specifying a Signalling Solution
WebWayOne IT Advisory notes
Dual path installation – where one of the signalling paths is unavailable
Product selection

Specifying a Signalling solution

It is vital that the Alarm System (AS) has the ability to transmit alarm activations reliably over a telecommunications network to a remote Alarm Receiving Centre (ARC) where Keyholder, Police or Fire response is required.

The generic name used by the security industry to describe this network is an Alarm Transmission System (ATS).

- The ATS is the telecommunications link between the Alarm System (AS) and the ARC. It transports critical data (alarms) from the AS to the ARC. The ARC Operators will process these alarms and despatch the appropriate response (Keyholder, Manned Guarding, Police, Fire Brigade etc).

- An ATS should incorporate a network-monitoring feature that identifies whether a telecommunications network is operational and has the capability of transmitting alarms to an ARC.

- An ATS can incorporate one or more Alarm Transmission Paths (ATPs):-

- Single path (SP) - using a single telecommunications network
- Dual Path (DP) - combining two telecommunications networks (one primary, the other as back-up)

The time taken by the ATS to determine that a network is unavailable (the network is "down") is called the "Reporting Time" and is defined in the European Standard EN50136-1:2012, Table 3.

Table 3 — Maximum reporting time

	SP1	SP2	SP3	SP4	SP5	SP6	DP1	DP2	DP3	DP4
Primary ATP Reporting time	32 days	25 h	30 min	3 min	90 s	20 s	25 h	30 min	3 min	90 s
Alternative ATP Maximum period when primary operational	Op	Op	Op	Op	Op	Op	50 h	25 h	25 h	5 h
Alternative ATP Maximum period when primary failed	Op	Op	Op	Op	Op	Op	25 h	30 min	3 min	90 s
ATS reporting time [a]	32 days	25 h	30 min	3 min	90 s	20 s	50 h	60 min	6 min	3 min

Key
OP = Optional
[a] Where an ATS includes more than two ATPs the ATS reporting time shall meet the requirements of this table.

ATS Specification

Identifying the telecommunications networks available for alarm transmission at a protected premises will determine the best solution to protect the property and the reporting times that are achievable.

There are 3 distinct types of telecommunications networks that are commonly available and supported by ARCs as an ATS solution.

1	Broadband (ADSL, digital service)
2	Radio GPRS-2G/Edge/3G etc. (Cellular or mobile technology)
3	PSTN (Public Switched Telephone Network, an analogue service)

It should be determined what level of protection is required for the premises.

Is there an insurance requirement that should meet specific requirements of EN50136 & EN50131?
Does the risk require a single path ATS or a Dual path ATS?
Is Police response to an alarm event required?

Dual path ATS, network pairing

WebWayOne recommend that the following transmission network combinations are considered; listed in order of preference.

Dual path - Broadband (IP) with Radio back-up	
Primary path	Broadband (IP)
Secondary path	Radio (3G/GPRS)
Risk	Low to High (DP1 to DP4)
Replaces GPRS/PSTN systems, especially where a dedicated phone line can be removed or contention is likely. Cost benefit to the end user.	
No call charges for alarm traffic or remote connectivity.	
Contact ID, SIAIII & Remote Servicing supported.	

Dual path - Radio with Radio back-up (diverse network providers)	
Primary path	Radio (3G/GPRS) - Network provider 1
Secondary path	Radio (3G/GPRS) - Network provider 2
Risk	Low to High (DP1 to DP3)
Replaces GPRS/PSTN systems, especially where a dedicated phone line can be removed or contention is likely. Cost benefit to the end user.	
No call charges for alarm traffic or remote connectivity.	
Dual path solution where no landline is available	
Contact ID, SIAIII & Remote Servicing supported.	

Dual path - Radio with PSTN backup	
Primary path	Radio (3G/GPRS)
Secondary path	PSTN
Risk	Low to High (DP1 to DP3)
A dedicated PSTN line should be sourced in a high-risk installation with reporting times higher than DP2 (EN50136-1:2012).	
Contact ID, SIAIII and Remote Servicing supported	

Single path ATS

Single path Broadband (IP)	
Primary path	Broadband (IP)
Risk	Low to High (SP1 to SP4)
No call charges associated with alarm traffic or remote servicing.	
PSTN - Digital communicator replacement	
Remove dedicated telephone lines, cost benefit to end user	
Contact ID, SIAIII and Remote Servicing supported	
Next generation equivalent to "low tone" monitoring of PSTN line	

Single path Broadband (IP) with 3G Recovery path	
Primary path	Broadband (IP)
Recovery path	Un-monitored 3G/GPRS
Risk	Low to High (SP1 to SP4)
No call charges associated with alarm traffic or remote servicing.	
PSTN - Digital communicator replacement	
Remove dedicated telephone lines, cost benefit to end user	
Contact ID, SIAIII and Remote Servicing supported	
Next generation equivalent to "low tone" monitoring of PSTN line	
Recovery path allows remote access and alarm transmission even if broadband is "down"	

ATS Specification

Single path Radio 3G/GPRS	
Primary path	Radio 3G/GPRS
Risk	Low to Medium (SP1 to SP3)
No call charges associated with alarm traffic or remote servicing.	
PSTN - Digital communicator replacement	
Remove dedicated telephone lines, cost benefit to end user	
Contact ID, SIAIII and Remote Servicing supported	

Single path ATS with diverse routing

Broadband (IP) with PSTN back-up	
Primary path	Broadband (IP)
Recovery path	PSTN
Risk	Low to Medium (SP1 to SP3, DP1 to DP2)
No call charges associated with alarm traffic or remote servicing via Broadband	
Diverse ATS where no radio is available	
Contact ID, SIAIII and Remote Servicing supported	

Suggested network and reporting time pairing

Based on EN50136 - 1: 2012, Table 3

SP1	SP2	SP3	SP4	SP5	SP6	DP1	DP2	DP3	DP4
Single Path Broadband (IP)									
Single path Radio									
						DP - Broadband - Radio			
						DP - Radio			
					DP - Radio/ PSTN				
SP1	SP2	SP3	SP4	SP5	SP6	DP1	DP2	DP3	DP4

ATS Specification

Evaluating the Telecommunications services at a protected premises.

Broadband/ADSL

The following questions will determine the ability to utilise Broadband (ADSL) as an Alarm Transmission path.

Do you use the internet in the office?
If "yes" then it is highly likely that fixed line broadband is available
Is the broadband used for browsing? Do you have any business applications using it as well?
If business applications are used, there is a possibility that the client out sources their IT.
Who is responsible for IT implementation or who would you talk to if there was a problem with your computer or accessing the internet?
This will determine if the IT resource is in-house or externally sourced, and the person that will be able to discuss the system requirements with you.
Do you know where the router is located?
Identifying where the router is located will help plan the installation. Is it accessible, is it close to the Alarm System, will the engineer run ethernet cable or use wifi to connect to the router.

Broadband using a local Wifi connection

Wifi connectivity is widespread and common. Used in domestic, public and private network applications it is familiar to many users. Wifi connectivity from mobile devices, game consoles and computers to a wifi router is almost second nature to many.

Local connectivity to the Wifi of an alarm system is monitored in the same way as a wired or wireless connection, with disconnection from the wifi network identifiable within 3 minutes.

Is WPS supported on the router (Wifi protected set-up)?
WebWay Wifi devices support WPS
Do you know what the name of the Wifi network (SSID) and the password?
Your engineer will need access to both of these on the day of installation. Both may be defaulted and found labelled on the router, or with the IT services provider.
How far will the Alarm System and SPT be located from the router?
The WebWay Wifi device can be moved away from the AS/SPT with a wired connection

Wifi connectivity (like radio connectivity) and availability can be affected by a number of factors such as building materials, wall thickness etc. In a clear line of sight Wifi connectivity will be effective within a 100m radius without the need for boosters or repeaters.

ATS Specification

Mobile data

A radio survey has merit, but the results should be taken as a guide only. Radio service delivery is transitional and affected by external influences such as cell maintenance, building construction and even seasonal weather conditions.

WebWay solutions use the mobile data network as a transmission path*. A simple test for connectivity is to connect to the Internet from a smart phone or tablet. Try accessing a website such as www.bbc.co.uk, your company website or www.webwayworld.com

Alternatively download the "Open Signal" App; this will provide detailed local cell information and download speeds, and is free of charge.

Are download speeds to a smart phone or tablet acceptable?
A fast response to an internet connection to a website is a good indication that data services are good. Look for GPRS, Edge, 3G or 4G indications on the device. If download speeds are very slow, then there are additional checks to be made.
Does the client know which mobile services work better in the area than others?
Whilst a roaming SIM card should connect to any network it is useful to know what are the "strongest" networks at the location.
If mobile data connectivity is poor, is there anywhere in or outside the building that the client has experience of obtaining service?
Investigating where service is accessible may indicate a good location for either the SPT or the antenna.

* A successful voice call is not an indication that a data service is available. The voice network differs in service delivery and therefore has no relevance to data transmission.

Signal Strength as a service indicator

Signal strength indications are transitory and affected by a number of factors.

WebWay devices operating in a 2G environment will display the following readings on the Starburst display.

2G	0 - 2	3	4 - 10 (Indicated A)
Advisory notes	High probability of intermittent or no service at all. Alternate antennas or moving the SPT advised. Upgrade to 3G recommended.	Minimum recommended reading. Alternate antennas may still be required.	High probability of good service without the use of alternate antennas

Signal strength figures become almost irrelevant in a 3G installation with much improved data error correction and stability than 2G services. Excellent network availability can be obtained with minimum values indicated.

3G	0	1 - 2	3 - 10 (Indicated A)
Advisory notes	No service	Minimum service levels, alternate antenna or moving the SPT may improve service availability.	High probability of good service without the use of alternate antennas.

Additional considerations.

Avoid locations where radio penetration is likely to be hampered or prohibited. Underground, metal clad strong rooms, under stair/floor recesses.
Building penetration is affected by cell frequency. Relocate closer to external walls, or roof space if reception is poor.
Use applications such as Open Signal to review cell frequencies

Radio Frequencies

Cellular masts & services operate different frequencies

The lower the frequency the greater the building penetration and the greater the coverage radius

Higher frequency masts have a greater capacity

Building penetration is subject to construction materials, wall thickness and location of the device (e.g. basement etc)

4G
800Mhz

3G
900Mhz

3G
2100 Mhz

2G
900 Mhz

2G
1800 Mhz

ATS Specification
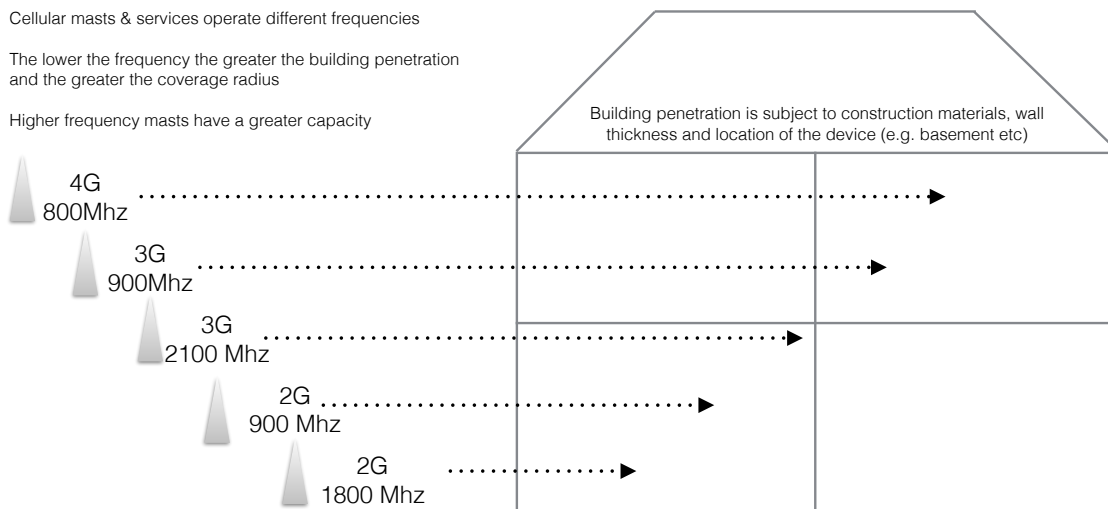
PSTN

The following questions will assist in determining whether PSTN is suitable for Alarm Transmission at a premises.

Is the alarm system on a dedicated or shared line?
Only a dedicated line is suitable for medium to high risk.
Is the line shared with Broadband (internet) services?
it is advisable to investigate Broadband as the favoured solution.
What signalling method is currently installed, Digi or monitored ATS?
Do you know which provider, if monitored?
What grade of system is installed?
Graded 2 to 4 (2 being low risk, 4 is high risk)
Is this a BT line or do you buy from another provider?
Carrier pre-selection may result in network delays that prevent modems connecting reliably.
Do you need to dial 9 before you make a call?
Identifies whether there is a PBX installation onsite
Is Cli enabled (caller display, can other users see your number when you call them)?
Enables the ATS to verify the alarm circuit
Can you make outgoing calls on the line?
The PSTN line will be unsuitable for the Alarm System until the restriction is removed
Is this line shared with other devices, phones, fax etc. are these devices frequently use?
An alarm cannot be transmitted if any of the additional devices are active at the same time

Having installed the system the end-user will be instructed in its use. This should include information and guidance on the way the alarm transmission is achieved and the consequences in changing network providers, adding equipment to the systems or tampering with the networks.

WebWay remote diagnostic tools, Command Centre and WebWayWorld, provide real time fault diagnostics that allow the maintainer to determine the cause of an Alarm Transmission Path fault and the appropriate action. This information can identify whether the fault can be attributed to user error or tamper that may result in a chargeable site maintenance visit.

PSTN

The End User is advised that a dedicated PSTN Circuit is used for the Alarm System (AS) where a maximum reporting time of 3 minutes (DP3 or DP4, defined in Table 3 of EN50136-1:2012) or Customised reporting times equal to or shorter than DP3 but greater than DP2.

Where the AS will co-exist with other services on a "shared" PSTN circuit (such as Fax or Voice) the end user should be advised that there is a risk a critical alarm activation may not be transmitted immediately if the line is already in use. Shared services should be documented by the Security Company and signed off with the end user at the time of installation.

The following conditions may render the PSTN line unsuitable or restrict the transmission of Intruder or Fire events. The end user must inform the Security Company immediately if any of these conditions are installed post installation.

New systems or services are added to the telephone line that may overload the circuit.
A non-British Telecom service provider has been selected by the end user for their PSTN services (Carrier Pre-Selection). Carrier pre-selection can add delays to the network and cause transmission failure.
ADSL (Broadband) has been installed alongside the PSTN line used by the Intruder System (an appropriate ADSL Filter must be installed).
Call Baring or Call Minder have been installed on the PSTN circuit.
Cli is withheld.

The WebWayOne ATS has the capability to remotely identify the probable cause of an individual Alarm Transmission Path (ATP) failure and determine the appropriate remedial action
Failure to advise the Security Company of any of the above may incur costs should an engineer call out identify that any of the above that has been installed since the initial installation as a cause of system fault.

Broadband/ADSL

The end user shall be made aware that the ADSL Router must not be intentionally down-powered or disconnected from the ADSL circuit.

The Security Company should be contacted before any changes to the local network or firewall rules (e.g. changes to IP Addressing schemes, Firewall routing amendments) are made that may affect the operation of Ethernet based signalling devices.

Where Wireless connectivity from the SPT to the router is desirable the end user will inform the Security Company of any amendments to the router access user-names & passwords that may affect the operation of the SPT.

Any building works that may impair wireless reception between the router and the SPT should be highlighted to the Security Company at the earliest opportunity.

The WebWayOne ATS has the capability to remotely identify the probable cause of an individual Alarm Transmission Path (ATP) failure and determine the appropriate remedial action

Failure to advise the Security Company of any of the above may incur costs should an engineer call out identify that any of the above that has been installed since the initial installation as a cause of system fault.

Mobile data

The ATS Service provider and the Security Company cannot guarantee radio service delivery at the protected premises from a survey of signal strength alone. There may be locations where radio reception is not of the quality desirable when used as an Alarm Transmission Path.

Aerial Positioning

The Antenna should be located as far from the SPT as possible.
The Antenna cable should not be tightly coiled or placed inside the steel enclosure of the PSU or Intruder System
The Antenna cable should not be cut or modified in any way.

Where signal quality is poor (or unusable) within the protected area it is permissible to locate the antenna externally. Precautions in respect of tamper or intentional damage should be taken into consideration.

Poor quality radio reception may require the following remedial action:-

The signalling equipment should be relocated with the following considerations which may incur additional labour and material costs.

Additional Power Supply and dedicated Fused Spur
Additional Network Point
Additional Antenna; external location-is-preferable.

The WebWayOne ATS has the capability to remotely identify the probable cause of an individual Alarm Transmission Path (ATP) failure and determine the appropriate remedial action. Where a radio delivery path is utilised additional antennas, cabling and labour may be charged by the Alarm Company according to contract.

Additional Considerations

Spare Stock

The communications components in an Alarm Transmission System are critical to the performance and protection of property. Service Engineers should have access to spare SPT stock in order to carry out effective fault diagnosis and replacement if necessary.

Dual Path Installation – where one of the signalling paths is unavailable.

Introduction

Occasionally a Dual Path ATS (Alarm Transmission System) installation cannot be completed because one of the ATPs (Alarm Transmission Path) is unavailable (most of the points covered here can equally apply to Service). This section provides operational advice to installers and ARCs in these circumstances.

Reporting times quoted within this document are aligned with EN50136-1:2012; Table 3.

Table 3 — Maximum reporting time

	SP1	SP2	SP3	SP4	SP5	SP6	DP1	DP2	DP3	DP4
Primary ATP Reporting time	32 days	25 h	30 min	3 min	90 s	20 s	25 h	30 min	3 min	90 s
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Alternative ATP Maximum period when primary failed	Op	Op	Op	Op	Op	Op	25 h	30 min	3 min	90 s
ATS reporting time [a]	32 days	25 h	30 min	3 min	90 s	20 s	50 h	60 min	6 min	3 min

Key
OP = Optional
[a]   Where an ATS includes more than two ATPs the ATS reporting time shall meet the requirements of this table.

Transmission tests

During the installation of a Dual Path ATS the operability of all available ATPs should be tested. This will involve the disabling of each ATP individually and a test signal via the alternate ATP signalled to the ARC who should confirm receipt.

ATS Specification

The SPT can simulate ATP failures via the push button menus (Mk6) or the on board DIP switches (pre Mk6). The relative instructions can be found in the equipment manuals.

Situations where a service is not available

Prior to a Dual path installation a site survey should have been completed which will determine that all the specified and agreed telecommunications services will be in place on the day of installation. This should include any internal network infrastructure such as Cat5 or Telephone cabling, Wifi SSID & Passwords and network routing. This is the responsibility of the Customer.

Where services are not present and the Installer has not been informed, there may be additional costs for site revisits and monitoring cost implications due to reduced or changes in the service provision.

Broadband/ADSL

There is no Broadband available (new build) but is scheduled for installation
A network port is not accessible
The Cabling has not been correctly patched to the customers router
The Cabling is suspected faulty and will require investigation
The IT department have not enabled network routing to the ARC

Where Broadband is not available the following options are available.

Install a second WebWay 3G module and run as a Dual 3G service.

Where there is no landline (Broadband or PSTN) available the SPT should be reconfigured for radio only operation in conjunction with WebWay Technical Support with the following consultation with the client and appropriate advice.

The ARC or Installer shall be notified by WebWayOne
The reporting time will be set to SP3 (30 minutes)
A return visit scheduled to connect and reconfigure for DP operation with a second WebWay 3G module.

Alternatively

If the SPT will support PSTN and a line is available, the equipment can be reconfigured for Radio/PSTN installation in conjunction with WebWayOne Technical Support, and the following consultation with the client.

The reporting time will be set to DP2 where a shared PSTN line is available or DP3 if the PSTN can be dedicated to the AS.
Cli must be enabled
Out going calls should not be barred

WebWay Support should be notified of:

Is Carrier pre-selection used on the line
Does the line route through a PBX
A return date to revert to Broadband operation should be discussed

PSTN

There is no PSTN available (new build) but is scheduled for installation
A PSTN point is not available
The line has the following services that have to be applied or removed
Cli presentation (must be enabled on the line)
Outgoing Calls barred (must be removed)
There are too many devices installed on the line
A dedicated circuit has not been provided (DP2 installations and above)

Where there is no PSTN* available the SPT can be reconfigured for radio only operation, or if available Dual 3G if a WebWay Dual 3G module is available. The reconfiguration is carried out in conjunction with WebWay Technical Support with the following consultation with the client and appropriate advice.

The reporting time will be set to SP3 (30 minutes) or an appropriate DPx if a Dual 3G module is available
A return visit scheduled to connect and reconfigure for DP operation if a Dual 3G module is not available at install.

*Note; it is advisable to ask the client whether a Broadband line has been installed since the system was specified. The installation may be changed to Broadband (IP)/Radio if this is the case.

Radio

There is no radio service to the device

There is no coverage in the vicinity
The location in the building is not suitable (basements etc)
A local serving cell is temporarily out of service
There is a problem with the SIM card

Whilst unusual, there are locations where a Radio path is not available, and is not likely to be available for the foreseeable future due to location and network coverage.

Where radio is not available due to the location of the equipment in the building and the service is unavailable or intermittent, the following should be considered.

Install alternate antenna's to improve service
A disc antenna may provide improved service
A High Gain antenna will improve the reach of the antenna from the SPT to an area where service is improved, this can be up to 20m from the SPT and externally mounted.
The SPT can be moved to an area in the building where service is improved with the following considerations.
Network or Telephone points available
Physical power supply and battery backup
Fused spur for the power supply

Where additional equipment such as the antennas, power supplies and remedial work are required but are not available or the work cannot be completed on the installation day, the SPT can be reconfigured for Broadband only or Broadband PSTN (if there is a suitable PSTN line available) as a temporary measure.

Nb. A WebWayOne SPT cannot be configured for single path operation where PSTN is the remaining (working) ATP but may operate in a temporary capacity with the radio path in fail.
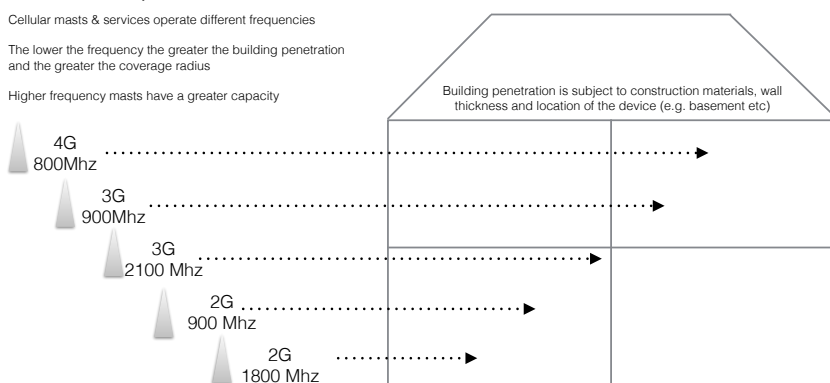
Additional Radio installation considerations

Avoid recesses, underground or strong room locations where radio penetration is likely to be hampered or prohibited. Building penetration is related to the frequency of the signal from the serving cell and can have a significant impact on the quality of service that can be obtained.

Radio Frequencies

Cellular masts & services operate different frequencies

The lower the frequency the greater the building penetration and the greater the coverage radius

Higher frequency masts have a greater capacity

Building penetration is subject to construction materials, wall thickness and location of the device (e.g. basement etc)

4G
800Mhz

3G
900Mhz

3G
2100 Mhz

2G
900 Mhz

2G
1800 Mhz

ATS Specification

By using applications such as "Open Signal" the local cells operating frequencies can be obtained which may be used to determine a suitable location for the SPT.

In a Radio/PSTN installation, the SPT may temporarily be left with the radio path in fail but operating on the PSTN circuit. However the client must be informed and a return visit arranged to complete the remedial work.

Note that a Remote Connection to the SPT via the PSTN line is not possible.

If radio is unlikely to be resolved the installer should consider an alternate network combination.

There are two options available if there is no useable radio network, these can be configured by WebWay Technical Support, in both instances the Installer and ARC will be notified by WebWayOne.

The Installer should notify the client and insurer.

Broadband (IP)/PSTN

If a PSTN line is available, the SPT can be configured for Broadband (IP)/PSTN operation.
This is not a "true" dual path ATS but does provide resilience
It is recommended that the PSTN is on a separate circuit to the Broadband connected to the SPT
The PSTN line should be a dedicated circuit where reporting times greater than DP2 are required

Broadband (IP) Single path

Where there is no Radio or PSTN available
SP3 reporting times are recommended.

Appendix

Abbreviations

ADSL	Asymmetric Digital Subscriber Line
AE	Annunciation Equipment
ARC	Alarm Receiving Centre
AS	Alarm System
ATE	Alarm Transmission Equipment
ATP	Alarm Transmission Path
ATS	Alarm Transmission System
ATSN	Alarm Transmission Service Network
ATSP	Alarm Transmission Service Provider
ADSL	Asynchronous Digital Subscriber Line
GSM	Global System Mobile
MCT	Monitoring Centre Transceiver
PSTN	Public Switched Telephone Network
RCT	Receiving Centre Transceiver
SPT	Supervised Premises Transceiver

Product selection – by Reporting time.

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Pre EN50136-1:2012 reporting times, superseded by Table 3 (above)

Grade	Primary	Secondary	Catastrophic
Grade 2	25 hours	25 hours	Not defined
Grade 3	5 hours	25 hours	Not defined
Grade 4	3 min	5 hours	Not defined

Cross reference – Graded reporting times to Categories

System Grade	Single Path	Dual Path
Grade 1	SP1	-
Grade 2	SP2	DP1
Grade 3	SP3	DP2
Grade 4	SP4, SP5, SP6	DP3, DP4

ATS Specification

WebWay supported categories by product

Product	Category	IP	Radio	IP/Radio	Radio/ PSTN	IP/PSTN	Radio/ Radio
Go	SP1, SP2, SP3	Y	-	-	-	-	-
Go+	SP1, SP2, SP3	Y	-	-	-	-	-
Smart	DP1 to DP4	-	-	Y	Y (not DP4)	Y (not DP4)	Y (not DP4)
Mini	DP1 to DP4	-	-	Y	Y (not DP4)	Y (not DP4)	Y (not DP4)
Pro	DP1 to DP4	-	-	Y	Y (not DP4)	Y (not DP4)	Y (not DP4)
Nano	SP1 to DP4	Q3/16	Y	Q3/16	-	-	Q3/16 (not DP4)

Broadband - Survey form (Primary ATP)			
IT contact:-	Name:-	Phone:-	e:mail:-
ARC Destination IP 1*	ARC Destination IP 2*	Route to Port 50561 (UDP)*	
xxx.xxx.xxx.xxx	xxx.xxx.xxx.xxx	Y/N	
IP Addressing Dynamic (DHCP)		(If yes, no further IP information required)	
Y/N			
IP Addressing Fixed	SPT IP Address	Subnetmask	Default Gateway
	xxx.xxx.xxx.xxx	xxx.xxx.xxx.xxx	xxx.xxx.xxx.xxx
Is an IP Port Available	Distance from panel	Cabling required?	
Y/N	xMtrs	Y/N	
Dual Path System specified?	Alternate Path	Reporting time (as per EN50136-1:2012 table 3)	
Y/N	(if yes to Dual Path)		
System deviation from Spec?	Alternate signalling	Reason for deviation.	
Y/N			
Local Line fault	Indicate on comms fail	Indicate single path fail (Optional)	
	Y/N	Y/N	
Wifi Connection	SSID (network name)	Password (may not be provided until install)	

PSTN Connectivity - Survey form (backup ATP)		
Contact:-	Telephone:-	e:mail:-
Reporting time shorter than SP3 or DP2?		If yes, a dedicated line will be required.
Y/N		
Shared with Broadband?		If yes, a filter will be required
Y/N		
Cli enabled?		Cli must be enabled. If no, instruct client to amend with telephone service provider
Y/N		
Telephone number presented		Confirm number and Cli presentation by dialling to a device that can display the caller ID, such as your mobile phone.
(xxxxx) xxxxxxx		
Outgoing calls barred?		Outgoing calls must not be barred. If yes, instruct client to amend with the telephone service provider
Y/N		
PBX (prefix 9) in place?		Inform WebWay in order for the prefix to be configured onto the SPT
Y/N		
Is this a BT provided line?		Alternate suppliers of PSTN services (carrier pre-selection) may affect the availability of the telephone line. Inform WebWay.
Y/N		

ATS Specification

Radio - Survey form (Primary or backup - ATP)			
Contact	Name:-	Phone:-	e:mail:-
Is proposed installation in a sealed area or basement (under ground level)		If yes, the location is likely to be unsuitable for alarm signalling using radio as an ATP. The equipment may require relocation or an alternate antenna that can be installed outside this area.	
Y/N			
Web access via mobile device possible where antenna will be located		Using a mobile data device attempt to access a known website (www.webwayworld.com) or use the Open Signal App to review network availability http://opensignal.com	
Y/N			
Does SPT need to be moved?		New location	
Y/N			
Disc Antenna	HG Antenna (5M)	HG Antenna (10M)	HG Antenna (20M)
Y/N	Y/N	Y/N	Y/N
PSU required?	Fused spur available	IP Port (IP/Radio)	PSTN NT (Radio/PSTN)
Y/N	Y/N	Y/N	Y/N
Dual Path System specified?	Alternate Path	Reporting time (as per EN50136-1:2012 table 3)	
Y/N	(if yes to Dual Path)		
System deviation from Spec?	Alternate signalling	Reason for deviation.	
Y/N			
Local Line fault	Indicate on comms fail	Indicate single path fail (Optional)	
	Y/N	Y/N	
Wifi Connection	SSID (network name)	Password (may not be provided until install)	

ATS Specification

WebWayOne network routing information for customer IT Managers

This document provides an overview of the WebWayOne Alarm Transmission System where IP (ethernet/broadband) is utilised as the primary communications path between the protected premises and the monitoring station.

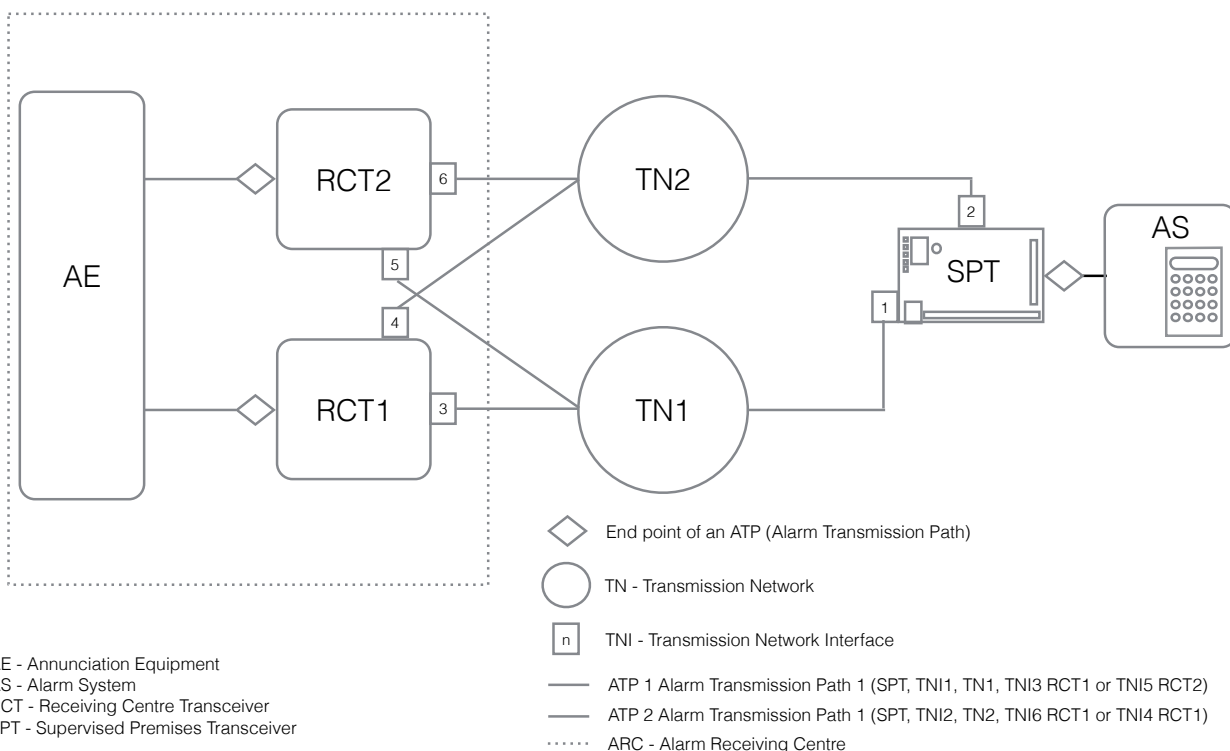The data includes network routing information that will be required by IT departments and operatives.

WebWayOne Alarm Transmission System overview

The WebWay Alarm Transmission System (ATS) consists of an SPT (Supervised Premises Transceiver) that is connected to a Local Area Network and transmits data (alarm traffic) from the Intruder detection system across the Internet to a pair of receivers (RCTs). Public and Private network infrastructures are supported including VPN connectivity.

The SPT & RCT combination monitors the availability of the broadband connection between the protected premises and the monitoring station. Detection of a network failure is defined by the European Security Standard EN50136-1:2012 with system design covered by the EN50131 series of standards.

A monitored Alarm System (AS) protects property and contents, and is often an insurance requirement.

WebWayOne Dual Path ATS

End point of an ATP (Alarm Transmission Path)

TN - Transmission Network

TNI - Transmission Network Interface

ATP 1 Alarm Transmission Path 1 (SPT, TNI1, TN1, TNI3 RCT1 or TNI5 RCT2)

ATP 2 Alarm Transmission Path 1 (SPT, TNI2, TN2, TNI6 RCT1 or TNI4 RCT1)

ARC - Alarm Receiving Centre

AE - Annunciation Equipment
AS - Alarm System
RCT - Receiving Centre Transceiver
SPT - Supervised Premises Transceiver

26 of 28

ATS Specification

Where risk is considered "high" the deployment of a dual path ATS may be specified. Radio backup using an International roaming 3G service (fallback to Edge & 2G) is supported. Note there is no logical route to the LAN from the radio interface.

In instances where radio reception is not available, PSTN may be used as the backup.

Note: The WebWay ATS is a machine to machine application and does not utilise any web based services. Connectivity via a proxy server is not required or supported.

SPT to RCT connectivity data sheet

ARC Name	Tesco
RCT 1 destination IP	xxx.xxx.xxx.xxx
RCT 2 destination IP	xxx.xxx.xxx.xxx
Destination IP Port	50561/UDP*
Source IP Port	Any
Bandwidth	
Poll (every 30 seconds)	180 bytes
Alarm message (on demand)	180 bytes
Local IP Addressing	DHCP or Fixed
Fixed network facing address	Not required
NATing	Supported
Port forwarding to the internet via an internal address	Supported
VPN connectivity from Private n/w to RCT	Supported
Encryption	128AES

*UDP is recognised as a "connectionless" protocol. In this application the UDP packet carries an encrypted and sequenced payload. The data within the packet includes the source IP address and source port. On receipt of the sequenced UDP packet, the RCT will immediately reply with a reciprocal (sequenced) UDP packet which the firewall should "NAT" to the SPTs local IP address.

About WebWayOne Ltd.

WebWayOne is an Alarm Transmission Service provider, leading the field in secure, high speed alarm signalling. A privately owned UK based company with in house Research & Development, Sales, Technical Support, Marketing, Operations & UK Manufacturing.

2005 - First to market with IP Alarm signalling with GPRS backup
2009 - First to market with International roaming agreements
2015 - First to market with 3G mobile

60K connections worldwide; Market sectors - Domestic, SME, Corporate, Banking & Finance

About WebWayOne Ltd.