

Fire Alarm Notification by Text for Deaf Mobile Users

Enabled by Text Message Server

Brighton based Fireco are manufacturers and installers of wireless fire safety products – namely fire door retainers and fire alarm alert devices for the deaf and hard of hearing.

The latest edition to Fireco's range is DMS (Deaf Message Service), a fire safety device that informs deaf people, via their mobile phone, when they are out and about in a public place such as a supermarket, shopping centre or library that the fire alarm is sounding.

Claire Chilton, an assessor for Level One British Sign Language exams and a TV presenter on deaf issues is profoundly deaf. She said *"DMS is such a brilliant idea. Using text messaging to let you know a fire alarm is sounding ... is using something deaf people use all the time."*



work with collaboratively and would support them with the SMS and wireless technology expertise needed to develop DMS.

Why was DMS developed?

One in seven people in the UK suffer some degree of deafness. Because deafness is an 'invisible' disability, we are probably less aware of it in our day-to-day lives than other disabilities. Many deaf people do not see themselves as disabled, but it is considered a disability under the Disability Discrimination Act (DDA) – which sets out to promote greater corporate and public awareness to the needs of deaf people.

DMS has been jointly developed by Fireco, ProcessFlows, Adaptive Modules and Wireless Logic. The idea to develop DMS came from one of Fireco's technicians, who identified that whilst Fireco could help alert a deaf person sleeping at home with their Deafgard bedside unit, they remained vulnerable in public places.

Fireco customer, the Hotel du Vin, issues their hard of hearing guests with a Deafgard unit on check-in and gives them a quick tutorial on how to operate the wireless, acoustically triggered device - which, when placed under a pillow, vibrates to wake the sleeper should the fire alarm sound. But this is not defacto in every hotel or public place and whilst Deafgard gives people the reassurance that at night they will be woken, deaf people have concerns that they could remain unaware of an emergency situation in a public place.

There are 76,168,000 mobile phone subscriptions in the UK (SMS mobile phone stats for 2008/2009), so utilising mobile technology to enable an anytime, anyplace, anywhere 'alarm sounding' notification device seemed an obvious way forward. Fireco set out to find partners who they could

"The main reason we chose ProcessFlows to help us with the SMS element of the project was rooted in their obvious and apparent technical skill, plus their ability to deliver what was needed swiftly and without error or delay. During our initial meetings, it became clear that both parties were enthusiastic to work on a project that could improve the safety and quality of life for deaf people."

Alan Busby, Managing Director of Fireco





The other Development Partners:

Adaptive Modules developed the bespoke PCB Motorola modem for DMS in which the SIM is located. They have also adapted the PCB of the modem and added unique firmware to govern the DMS controller protocol and functions.

Wireless Logic provides the SIM cards for the DMS Controller units. They were chosen as a development partner because of their unique billing portal system and cost-effective tariff. This will be a huge benefit when Fireco takes DMS into the export market and globalises sales.

How DMS works:

Stage 1 - Signing up

- User visits location where the DMS system is installed – which could be your local supermarket
- Signage informs users about DMS and gives them the number to text and location code to put in that text
- User sends a text with the location code to the DMS number
- The DMS server receives the text and adds the user to the location given
- The user is sent a text by the DMS server to let them know they are connected to DMS for that location
- After 12 months the user is sent a text asking them to reconnect to DMS

Stage 2 - When the fire alarm sounds

- When the fire alarm sounds (unless it's a test) DMS will send a text to the server
- Users connected to the specific location receive a 'Fire' text advising them to evacuate

Benefits:

For Users

- DMS gives deaf and hard of hearing people the reassurance that they will be as aware of an audio warning of an emergency situation as the rest of us
- All you need is your mobile phone and as long as you have a mobile phone signal strong enough to deliver a message, you will receive the warning
- Cost is not prohibitive – subscribers will only get charged a one-off connection text at their standard message rate

For Public and Service Providers

- DMS helps service providers and employers comply with the Disability Discrimination Act (DDA). It is designed to respond to a fire alarm installed in conformity with the British Standard 5839 Part 1.
- Simple installation (the DMS unit can be installed in under half an hour) and hassle free ongoing maintenance - DMS self tests itself weekly to check everything is OK and you can pause the unit to do your weekly fire test.
- Maintenance is provided by Fireco.
- Cost effective – only one DMS is needed for each fire panel.

