

DEWN – Disaster & Emergency Warning Network

GSM Based Disaster Alerting



Harsha Purasinghe: CEO – Microimage

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**DECEMBER
2004**



*A **tsunami surge strikes** the
Northern and Eastern Coast of Sri Lanka
with unprecedented ferocity*

Within minutes the devastation engulfed the Southern and South Western coastal areas of the Island





An **early Warning** would have saved lives... that warning never reached those who needed to know



Could **GSM** fill that **critical** need for an **intelligent** but ubiquitous
delivery mechanism for national disaster warning?

An instant warning which would be

- » *Effective in alerting citizens at day or night*
- » *Immune to Communication Network Congestion*
- » *Comprehensible in terms of local dialect*
- » *Directed to specific location or person
or equally applicable for mass dissemination*



Can **GSM** be used to save lives?



R&D on GSM Family of Tech

Cell Broadcasting

LBS Tech

Java/ Symbian/Microsoft

SMS

Birth of DEWN

Disaster & Early Warning Network Solution

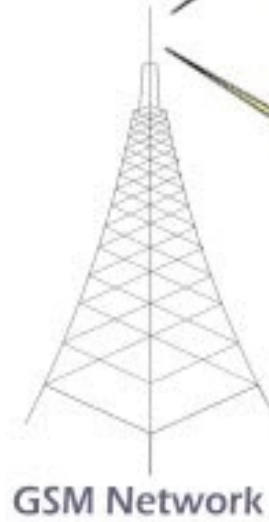
World's First GSM based Early Warning Solution



DEWNN

DISASTER AND EMERGENCY
WARNING NETWORK

System Architecture



Java/Symbian
Phone Application
Microimage

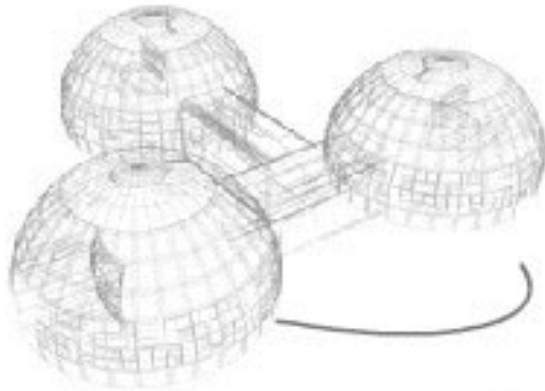


GSM Alarm Device
Dialog
UNIVERSITY OF WAIKATO

*System
Execution Flow*

Step 3

Disaster warning dissemination



**JAVA/Symbian/
Microsoft Handset**



**Standard GSM
Handset**



**GSM DEWN
Alarm Device**



JAVA/Symbian/
Microsoft Handset



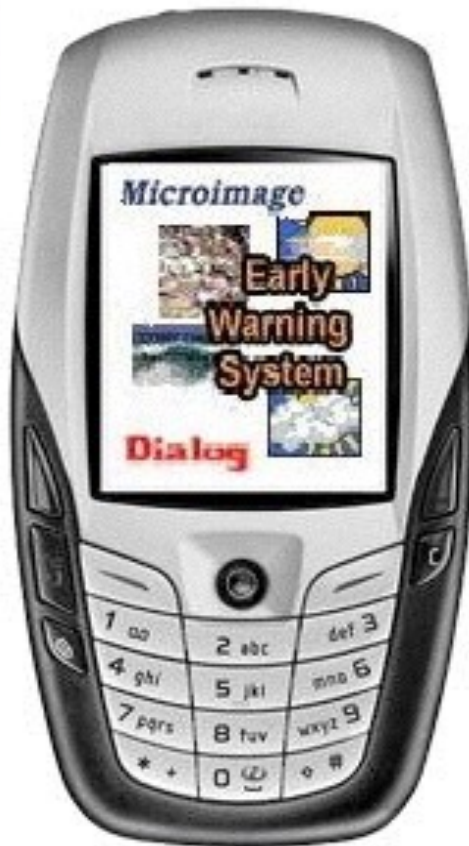
GSM DEWN
Alarm Device



Standard GSM
Handset

JAVA/Symbian/Microsoft Handset

System Architecture



Microimage

- » *Terminal resident warning application*
- » *Customizable and situation specific presentation*
- » *Downloadable over GPRS at no cost*
- » *Special Alarm Tone*



JAVA/Symbian/
Microsoft Handset

GSM DEWN Alarm Device

System Architecture

The GSM activated remote alarm is an electronic device that can be used for emergency warning purposes.

- » *Multiple wake up measures*
- » *Power source compatibility*
- » *A Back up power - up to 10 hrs standby*
- » *Multiple alarm interfaces (TV, Radio...)*

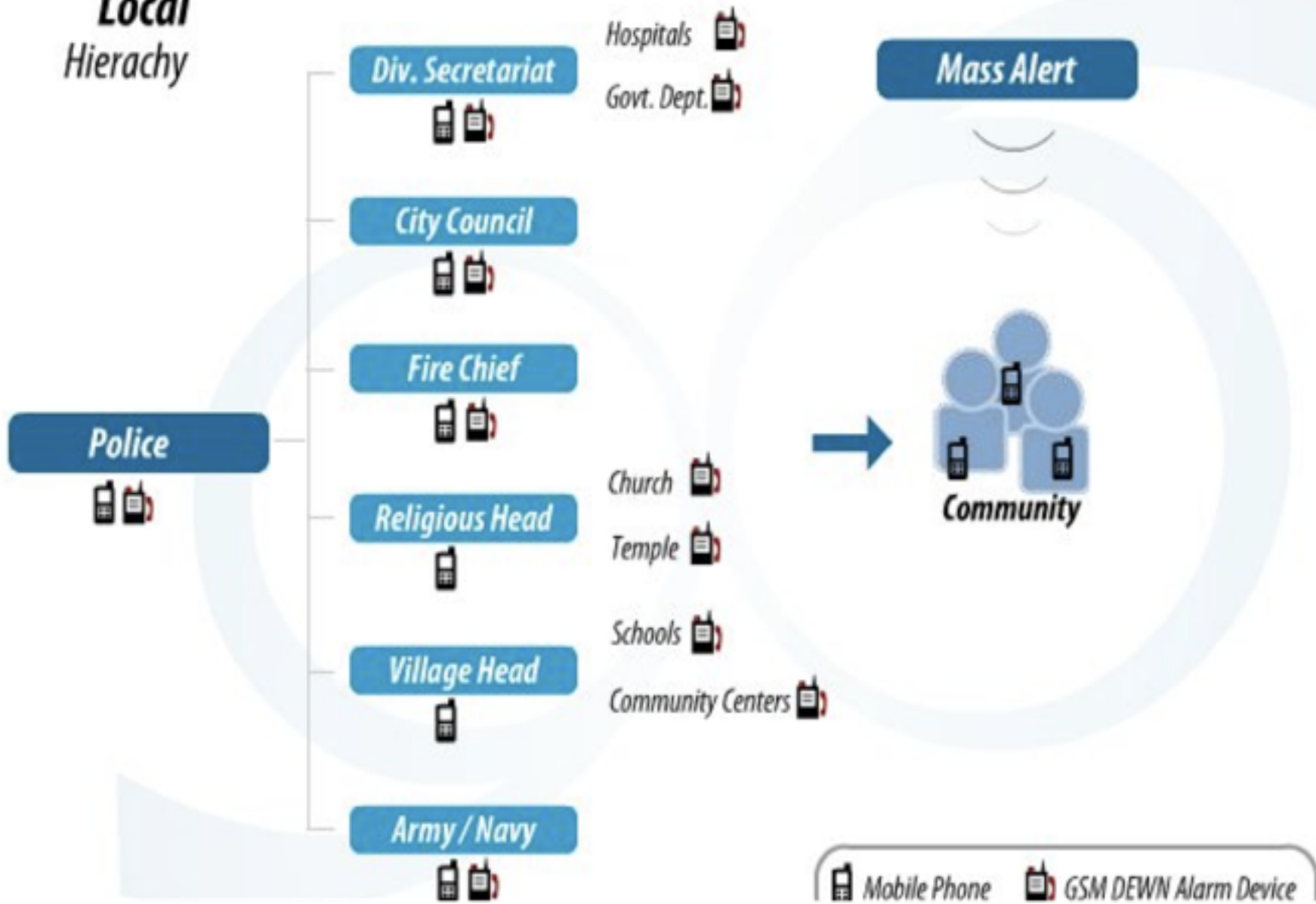


GSM DEWN
Alarm Device



Standard GSM
Handset

Local Hierachy

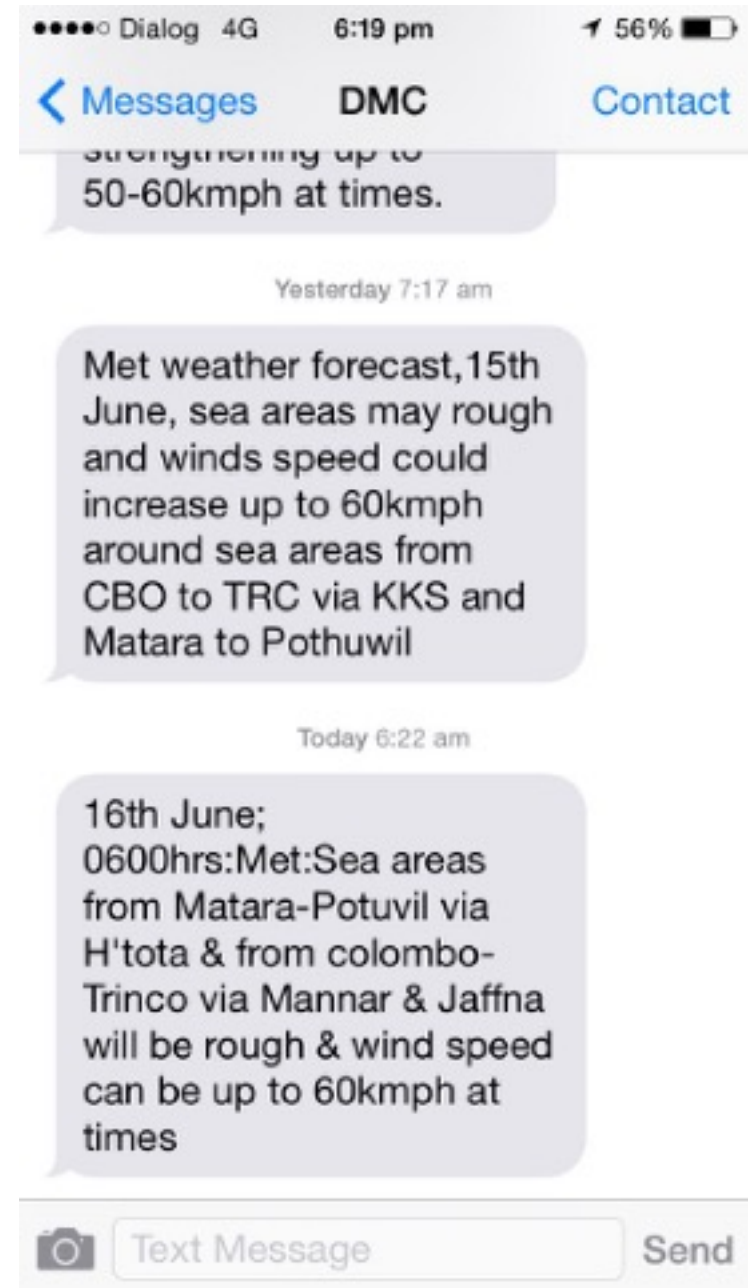


DEWN implementation in Sri Lanka



Officially handed over to the Government Disaster Management Centre in February 2009. DMC can now use DEWN for public warning in Sri Lanka.

DEWN - Today

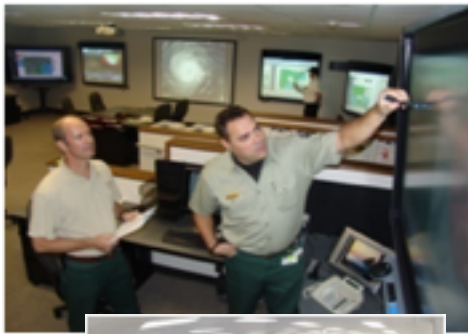


DEWN Future

- System Upgrade & Improvements
- DEWN API - CAP Compliant
- DEWN Smartphone App

DEWN API

Disaster Management Centre



Television



Radio



PC/Email



Public Signage



Telecom Operator

SMS

CB

IVR Push

Mobile

DEWN V2 with CAP Compliant DEWN API

DEWN Smartphone App



- Notification of Alerts & Warnings
- Notification Feed with Filtering
- Disaster/Weather/Traffic Alerts/Warnings
- Location Specific Alerts
- Multilingual
- Nearest Exit/Evacuation Points
- Audible Alarm for Disaster & Emergency Warnings
- Short Audible Tones for Alerts

Thank You