



identiMESH – The PC Program

Real time data collection and acquisition

Performance Monitoring And Notification

Internet Technology Reporting

Internet Technology Notification

identiMESH International Pty. Ltd.

Copyright © 2006 by identiMESH International Pty. Ltd. All rights reserved.

The information presented herein contains proprietary and commercial trade techniques and is copyright.

Additionally, aspects of the reporting system are the subject of patent applications.

Manual V1.02 – 19th Feb 2007

identiMESH PC Program

The identiMESH program is a “data processing engine” for automatic collection and processing of data from a real time data collection network of Mesh Unloaders and supporting equipment.

What this does in point form is;

1. Automatically and constantly collects data from Mesh Unloaders,
2. Stores the data into disk files,
3. Generates reports that are presented as web-pages that can be viewed across a network,
4. Creates a number of advanced performance reports to aid in monitoring staff performance in real-time,
5. Includes its own eMail client (send only) for prompt notification via eMail and transmitting data,
6. Includes options for processing data from “kiddie badges” to custom-track “at risk” or special interest staff at strategic locations.
7. Includes databases for control of equipment and configurations,
8. Includes processing controls (options) to tailor most of the programs operation,

Benefits

- Automatic exception processing keeps users advised of performance and any problems
- Improved service delivery – be informed of problems in a timely manner
- Saves significant time - no unloading required
- Automatic data archive via eMail for off-site backup
- New functions and facilities;
 - kiddie badge support,
 - clock updating,
 - battery monitoring.

FEATURES AND FUNCTIONS SUMMARY

General

Very high speed processing.
Internal send only eMail client
Optimised for minimum eMail messages
Internal logging of functions
Supports many Mesh Unloaders
Supports kiddie badge system
Context sensitive help system
Exceptions, Escalation and Status eMails

Reports

New performance measurement tools
Summary can be eMailed at end of day
Promotes proactive management
Report using web pages. Intranet capable.
Locations. Activity. Coverage. Return Time
Coverage report targets non compliance
Wands. Last activity. Battery. History.
Exceptions. Status. History.
Gap. List by location
Battery. History of performance.
Kiddie Badge. Summary. Last seen. eMail

Setups

Global – eMail addresses
Global – exception processing enables
Global – output web page processing
Global – Site name – for reports.
Profiles. Define KPIs and actions on fail
Locations. Define name and serial number
Wands. Define name and serial no
Unloaders. Define location & node address
Badges. Define name & action on sense

System Requirements

Optional eMail connection (internet)
USB Connection / selectable ports
Windows, CD, 5gb hard disk spare

INSTALLATION

Insert the CD and allow it to install itself with all its default options.

This will create the directory structure and start menu programs.

In Brief

Ideally installation should proceed as follows;

- Test the Mesh Unloaders
- Test the software and PC
- Deploy the Unloaders
- Check results

Each Mesh Unloader must be tested to ensure it is operating correctly

- Turn your Mesh Unloader(s) on, one at a time,
- Activity led will flash after startup and internal initialisation processing has completed,
- Fault led will show indicating that the clock needs updating from PC,
- Observe your Mesh Wands in proximity. Their data leds will flash as they are unloaded,
- Mesh Unloader will show “Wand In Proximity” when wands are close by (approx 20 to 40 metres radius depending on the site),
- Mesh Unloader will show “Wand Unloading” when data is being extracted from wands.
- Repeat this for each Mesh Unloader.
- Note that each Mesh Unloader has a “node address” this is used by the PC to extract data and it is important to note where you install each Unloader by recording its node number.

Test the PC and the Mesh Network

- Install the CD. Allow it to install “by default”.
- Connect the base station data cable to a USB port on your PC
- If drivers are required, they are located in the “Drivers” folder of the PC
- Start the “identiMESH” program.
- Select the correct USB port
- Bottom line of the screen will show data activity

- When Mesh Unloader interacts with PC, fault led will clear (clock updated)

Deploy Unloaders

Each Mesh Unloader should be sited in a position where staff will pass regularly and frequently. This is critical.

The whole idea of the system is to capture data as often as possible.

To do this it is important that enough Mesh Unloaders are used and they are sited where they can extract data from Mesh Wands as they pass by.

Check Results

- Switch on all Mesh Unloaders
- Check the “Mesh Unloader Clash” indicator. None should be showing. If they do, increase spacing between them,
- Start the identiMESH PC program.
- Check that all the Mesh Unloaders for the site have been coded into the Unloaders database.
- Make sure that the names associated with the Mesh Unloaders is correct,
- Observe the screen. At the bottom of the screen it will show each unloader having data extracted in turn.
- Each Mesh Unloader is checked in turn and you will see this happening,
- Turn on the status display to show instantaneous packet data transfers.
- Start internet explorer. Go to the reporting directory and load the main web report index file (usually “c:\EliteData\web\index.html”) and open it.
- Check reports.
- As the system is unloading for the first time it is probable that there is a quantity of data in each Mesh Unloader. The software will remove a percentage of the data from each Mesh Unloader and proceed to the next unit.
- Once all the Mesh Unloaders have been checked and emptied you will observe changes in the way the system operates. It will skip from Mesh Unloader to Mesh Unloader looking for data and extracting it in turn, skipping empty Mesh Unloaders and focussing on units with data to extract.

- In the “Locations” report, check that each location has been assigned to a profile that suits your application.
- Check that data is being received by all Mesh Unloaders in the system.

Reporting

The identiMESH reports are all done as “html” web pages. This provides worthwhile benefits;

- The real time nature of identiMESH reports is well supported by web technology,
- Reports can be viewed by many users at once,
- Web technology allows advanced formatting, linking and data display,
- Reports can be placed on a common area of an intranet server and visible to other users anywhere on the network;

Open the reports - Start Internet Explorer.

There are two ways to start your web browser to view the reports;

Use the “View ... Reports Index” option.

This automatically starts your default web browser and displays the index page for the reports.

Start it manually

Start your web browser.

Enter the address of your reports. By default it is “C:\EliteData\Web\index.html”

Choose links and options to show various reports

SUMMARY

Features and Functions

Requires Win-XP and eMail installed

Requires COM port or USB-COM adaptor for radio network connection

Constantly scans for data on an identiMESH radio unloader network.

Data downloaded into disk files on the PC

Data format EliteReporter compatible

Select COM port (1 thru 8)

Define drive path for web-page reports

Control diagnostic and status displays

Copy data at end of day into nominated EliteReporter "UnloadedData" folder.

One Centre

Up to 200 locations

Each location is assigned a profile that controls processing

Up to 50 profiles.

Each profile ;

- Defines if exception processing is required

- Defines exception times for each day of week

- Defines if eMailing exceptions is required

- Defines required return time

- Defines escalation time

- Defines unique Exception and Escalation eMail addresses

Reports presented as web-browser pages. Updated every minute.

Reports show;

- Last wand battery voltage and date and time of measurement

- Location stats - hits today, first hit, last hit, hits last 15 mins, hits last hour, average return time, if in exception

- Wand stats - hits today, first and last hit date and times

Unloaders - serial number(s), hits, status, firmware information

CONFIGURING THE SYSTEM

Summary

1. Options. Setup and test eMail setups and addresses and enable options to suit.
2. Options. Setup site name. Setup daily summary email based reporting if needed.
3. Maintain Profiles. Setup profiles. Determine performance criteria to suit. Setup eMail addresses if required,
4. Maintain Locations. Setup your location names
5. Maintain Locations. Assign serial numbers to locations
6. Maintain Locations. Assign profiles to locations
7. Maintain Wands. Setup wands
8. Maintain Unloaders. Setup Unloaders
9. Maintain Badges. Setup any kiddie badges if they are being used. Use the “Notify” option to enable or disable automatic eMail of information on badge movements.

KIDDIE BADGE SYSTEM

There are three parts to the Kiddie Badge System.

1. The software in the identiMESH PC program.
2. The software in the Mesh Unloaders that logs data from the kiddie badges themselves,
3. The kiddie badges.

The operation of the Kiddie Badges and the software in the Mesh Unloaders is automatic and does not require any configuration.

Configuration of the identiMESH program can and should be done to tailor operation. We suggest you do so.

Operation Overview Scenario

- A person carrying a “kiddie badge” approaches an area that has a Mesh Unloader installed.
- The Mesh Unloader senses the presence of the kiddie badge and records the information into its internal memory.
- The Mesh Network (a wireless data network) and PC extract data from all Mesh Unloaders (there can be many) and store it.
- The data is processed and the movement of the kiddie badge into areas is shown on a status screen.
- An eMail can be optionally generated (on a per badge basis) that shows the movements of a badge into the area of the various Mesh Unloader as they happen.
- When the person carrying the Kiddie Badge moves away from the Mesh Unloader, that is also detected and similarly treated – the person “left the area” – and an eMail generated.

Viewing Status.

Use the “kiddie badge” button on the reports main screen. This links to the report page.

Naming the badges.

Use the “Maintain...Badges” option.

Press the “New” button and enter the serial number of the badge and the name to be used for the badge.

The name is used on the screen display of badge movement AND on eMails that are sent (when enabled with the Notify option).

If you do not setup a badge then eMail notification will not be done and there will not be any name shown on reports – just the serial number of the badge (along with time and location information).

Notification via eMail of badge movements.

You can enable or disable eMail on kiddie badge movements.

This can be setup on a per-badge basis and only turned on for one badge in the event of a problem or situation requiring close monitoring.

When enabled, an eMail is sent to a nominated eMail address every time a badge is detected near a Mesh Unloader and every time a detected badge moves away from a Mesh Unloader.

The advantage of this is that a supervisor or service person can be advised immediately if a kiddie badge moves near to or away from a monitored area.

EXCEPTION PROCESSING AND PROFILES

What is an exception

An “Exception” is caused by something happening that is outside normal operation.

For example; if you have not attended a location as required, that is an exception – you failed to meet your target.

How are exceptions managed

Every location is assigned a “profile” that defines how data is processed as well as a number of options that control program operation.

In the profile is a list of opening and closing times as well as performance criteria. If actual performance does not meet what is setup in the profile then that is an exception.

Each profile also has a number of eMail addresses and control check-boxes that are used to send a message to staff that performance has not met the target. Exception processing can be turned on or off on a per location basis.

Once enabled, exception processing is an automatic function; if performance does not meet target then an exception is generated and an eMail is sent.

Additionally, exception processing can be turned off for all locations in the programs “Options” section.

PERFORMANCE MONITORING - ADVANCED REPORTS

Every minute identiMESH re-calculates all performance and re-generates all its reports. In this way everything is rebuilt every minute.

EXCEPTIONS Report

This is a list of all the exceptions that have been generated by the system for the day.

LOCATIONS Report

For each location, this report shows statistical information, last hit information and performance calculations.

Also shown is if the location is currently in exception and in “escalation” (exception not actioned as required).

COVERAGE Value

This is a new and special report. It creates a single number that is intended to highlight when locations have not been attended as contracted.

The way this works is to use the required return time and collect all pieces of time greater than this return time then express the total “out of time” as a percentage of the day.

The end result is that this calculation is a really good indicator of performance. It cannot be “swamped” by excess attendances. It finds and highlights problems.

GAP Report

This report shows by location all gaps in attendance greater in duration than the return time. For example, if the return time is 15 minutes then the gap report shows all times during the day that there are gaps in attendance greater than this number of minutes.