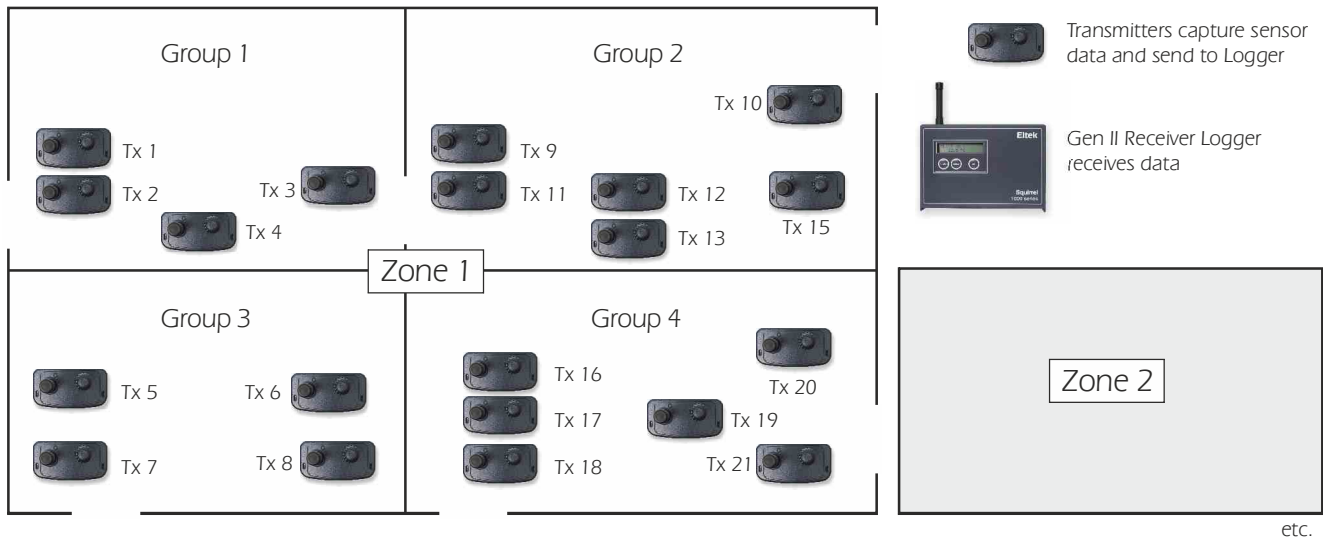# Darca Heritage

Eltek
SPECIALIST
DATA LOGGERS

Remote control and analysis software for museum and conservation monitoring with Eltek Gen II Heritage telemetry systems

Darca Heritage has been designed specifically for museum curators and conservators monitoring large installations. The software allows sensors to be referred to according to their physical location. Sophisticated but simple-to-use, it provides powerful tools for configuring and metering sensors, changing logger settings and updating site data automatically. Using Darca Heritage, data can be analysed either graphically or statistically, and reports generated.

In addition to standard measured values, calculated parameters may be added and analysed. Sensors may also be metered graphically on user-entered floor plans.

Site Overview

- The Site is divided into physical 'Zones', each of which is divided into 'Groups' of Transmitters, e.g.:

Transmitters capture sensor data and send to Logger

Gen II Receiver Logger receives data

etc.

Site Setup Features
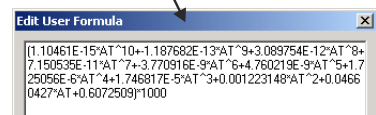
- Information about Site Layout is entered into Darca's Site Setup window. Each group contains a number of 'Channels':

Zones

Zone	Name
Zone 1	Basement
Zone 2	Ground Floor
Zone 3	1st Floor
Zone 4	2nd Floor

Groups

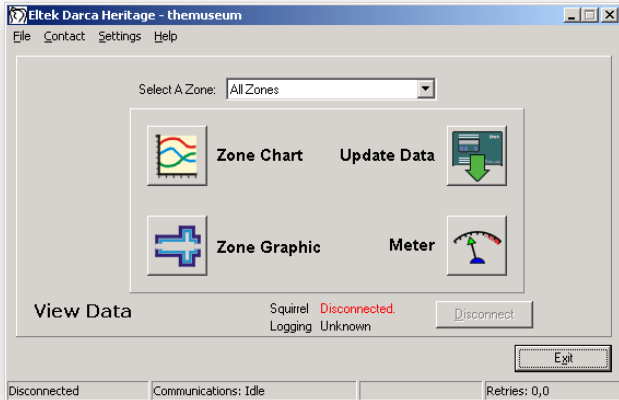| Group	Name	Zone	RHext	AText	RH	aT	ps	HDiff
Group 1	Modern art	1 (Basement)	34	30	1		✔	
Group 2	PDP workshop	1 (Basement)	35	32	3		✔	✔
Group 3	PDP reserve	1 (Basement)			5			
Group 4	Seminar room	1 (Basement)			7			

- Each 'Channel' is of a Parameter Type which may be either a physical sensor ('Squirrel') or calculated from a formula ('User'):

Parameters

	Type	Name	Axis	From	To	Units	Colour	Warning Alarm Hi	Plot?	Lo	Plot?	Main Alarm Hi	Plot?	Lo	Plot?	Formula
Param 1	Squirrel	RHext	1	0	100	%						(Sq)		(Sq)		
Param 2	Squirrel	AText	2	-5	85	°C						(Sq)		(Sq)		
Param 3	Squirrel	RH	1	0	100	%		60	✔	45	✔	(Sq)		(Sq)		
Param 4	Squirrel	aT	2	0	100	°C		23	✔	17	✔	(Sq)		(Sq)		
Param 5	User	ps	0	0	4000	mb										(1.10461E-15*AT^10+-1.187682E-1
Param 6	User	HDiff	1	-100	100	%		10		-10						RH - RHext

- The Alarm feature warns if any channel inputs are outside of 'safe' limits. Multiple alarms may be set up and warnings can be set to appear in a variety of ways

Edit User Formula

(1.10461E-15*AT^10+-1.187682E-13*AT^9+3.089754E-12*AT^8+7.150535E-11*AT^7+-3.770916E-9*AT^6+4.760219E-9*AT^5+1.725056E-6*AT^4+1.746817E-5*AT^3+0.001223148*AT^2+0.04660427*AT+0.6072509)*1000
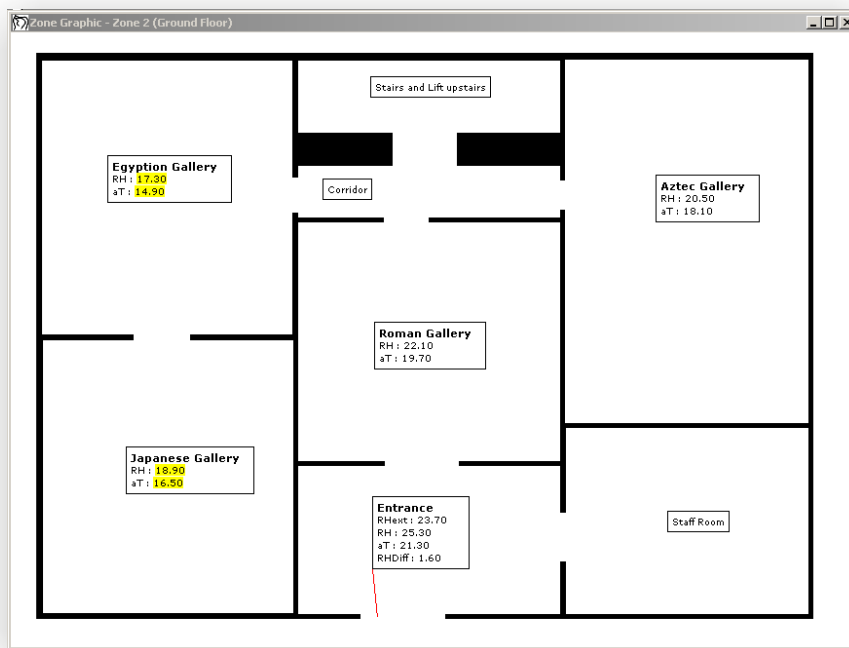
Darca Heritage

View Data Tools

- Easily jump to all Zones or a specific Zone when Charting or Metering

- Data can be manually updated from the Logger with the 'Update Data' tool, or set to automatically update at a specified interval

- Backup copies of Data and Site files made on every update for security

- Status of Logger is displayed from last connection

- 'Secondary User' installation option which gives only the View Data tools and allows no access to site editing

Real Time Metering

- Data can be metered graphically on user-defined bitmaps which show each group's physical location within a Zone:

- Zone Graphic is a bitmap that can be created in any Windows image editor

- Positions of groups are saved with the Site Setup

- Arrow tool for displaying specific position of group within Zone

- Channels appear highlighted in yellow if outside the warning alarm limits, or in red if outside the main alarm limits

- Text Comments may be added to the graphic

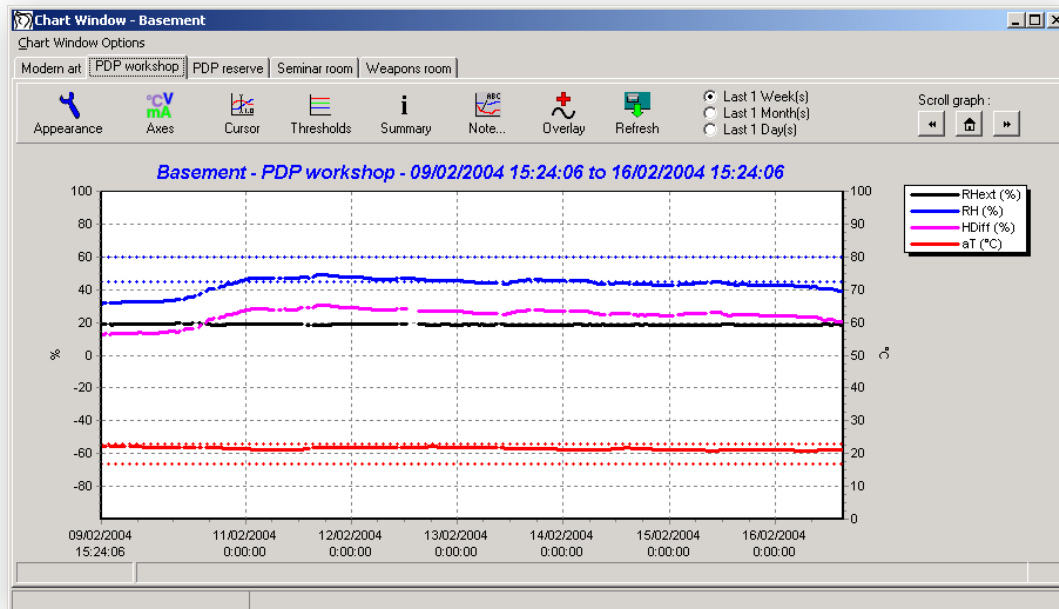- Multiple Zones can be metered simultaneously on screen

- Alternatively, the Meter Grid displays the metered data in numerical form with the option to view multiple zones simultaneously:

- The frequency at which the metered readings update is user-defineable

- 'Select Zones' tool gives the option to add any Zone from the Site for easy comparison

- Print button prints the metered data

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Powerful Charting Tools

- The Chart Window displays all the groups within a Zone on separate tabs:

- Alarm limits appear as dotted lines for each channel

- Channels from any Zone or Group may be overlayed onto the chart

- Top time axis may be added to overlay data from different time periods

- Chart can be scrolled and zoomed, and user-defined 'Time Selector' control flicks between different time periods

- Appearance of titles. axes, plot colours and graph colours is highly customiseable

- Cursor control to view raw data of a point on the graph

Chart Data Summary

- Summary window displays all data in current graph view (data from other Zones and Groups can be added for comparison):

- Information in summary window can be copied to the clipboard or printed

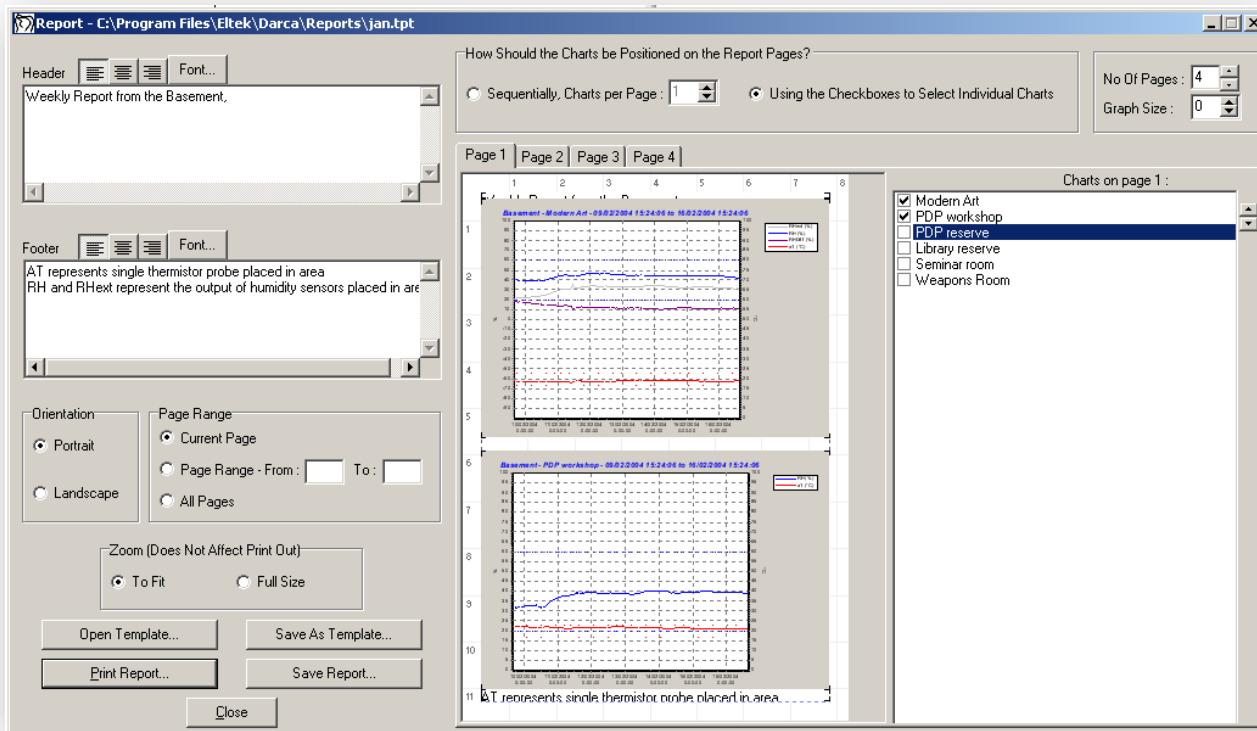- Find tool speeds up navigation when searching for a particular time stamp or reading

- Many different statistics can be displayed about the current graphed data including time spent in alarm:

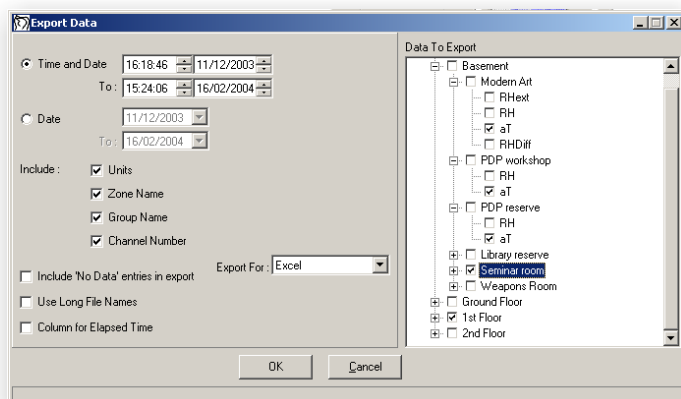| Channel	RHext (%)	RH (%)
Start Of Data	09/02/2004 15:24:06	09/02/2004 15:24:06
End Of Data	16/02/2004 15:24:06	16/02/2004 15:24:06
Valid Data	332	331
Max Value	49.3	45.8
Time Of 1st Max	12/02/2004 20:35:15	11/02/2004 17:22:42
Min Value	36.7	29.3
Time Of 1st Min	09/02/2004 17:18:41	09/02/2004 17:48:41
Average	44.881	40.874
Sum	14900.6	13529.4
Std. Deviation	3.291	4.095
Alarms		
RH (Modern art) (Warning Alarm) (45 - 60)		
Readings Within Thresholds	218	14
Time Within Thresholds	4 Days, 6:25:42	6:00:00
% Time Within Thresholds	60.969%	3.571%
Total Readings In Alarm	114	317
Total Time In Alarm	2 Days, 2:30:02	6 Days, 15:55:44
% Total Time In Alarm	30.060%	95.196%

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Reporting

- Graphs of the groups within a zone can be compiled into a report for printing or saving for future reference

- Headers and Footers can be added to the report

- Size of chart and the layout of the charts on the Report pages can be fully customised

- Initial 'Sequential' layout for fast and simple Report setup

- Report 'Templates' can be saved for each zone, storing layout and Header/Footer information

- Opening a saved Report also displays the Chart Window for the relevant Zone and time period

Export Data Tool for Advanced Analysis

- Data from any Groups / Zones from any time period can be exported to raw data file

- Advanced analysis can be performed in spreadsheet

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