HEAT & SHIFT Conference Expo
Cambridge, 2 December 2010

Harvard
ENGINEERING PLC

The Future of Street Lighting

John McDonnell
Managing Director

Harvard
ENGINEERING PLC

- E.on Energy Provider
- E.on Street Lighting Contractor
- Revolution
- PFI

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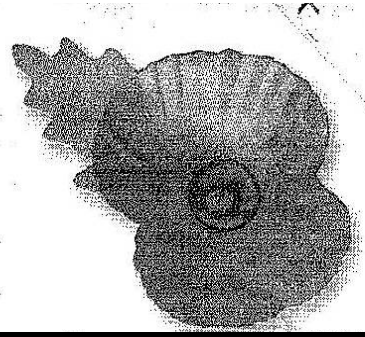
e·on

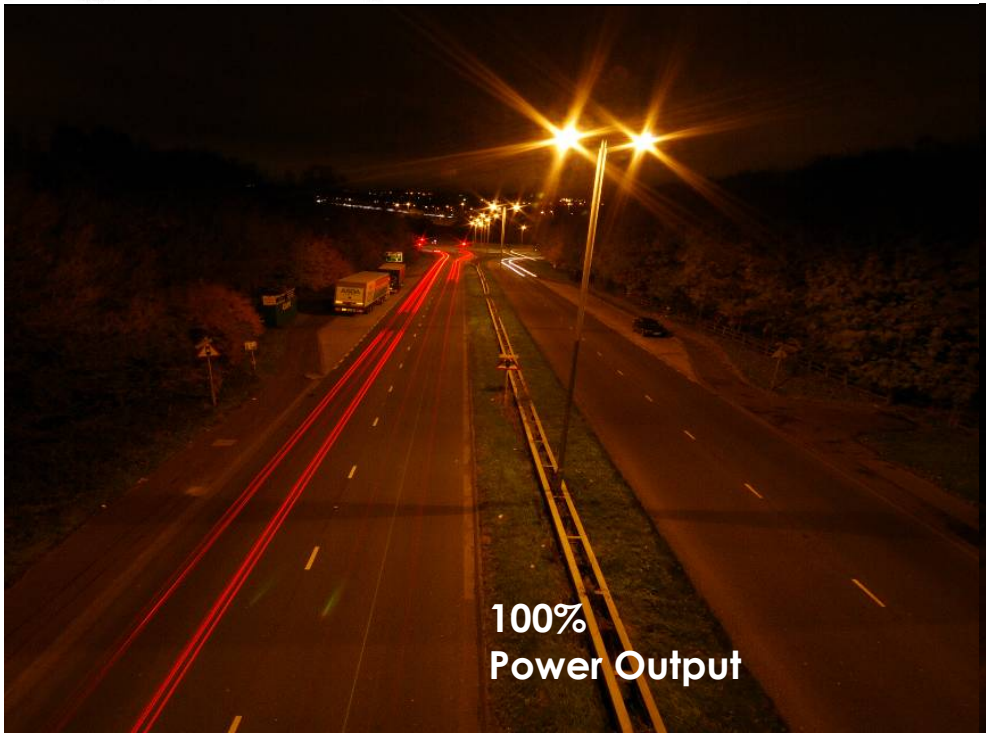
- Bid differentiation
- Now CMS standard output specification
- Carbon Reduction Commitment
- 40% Energy Saving

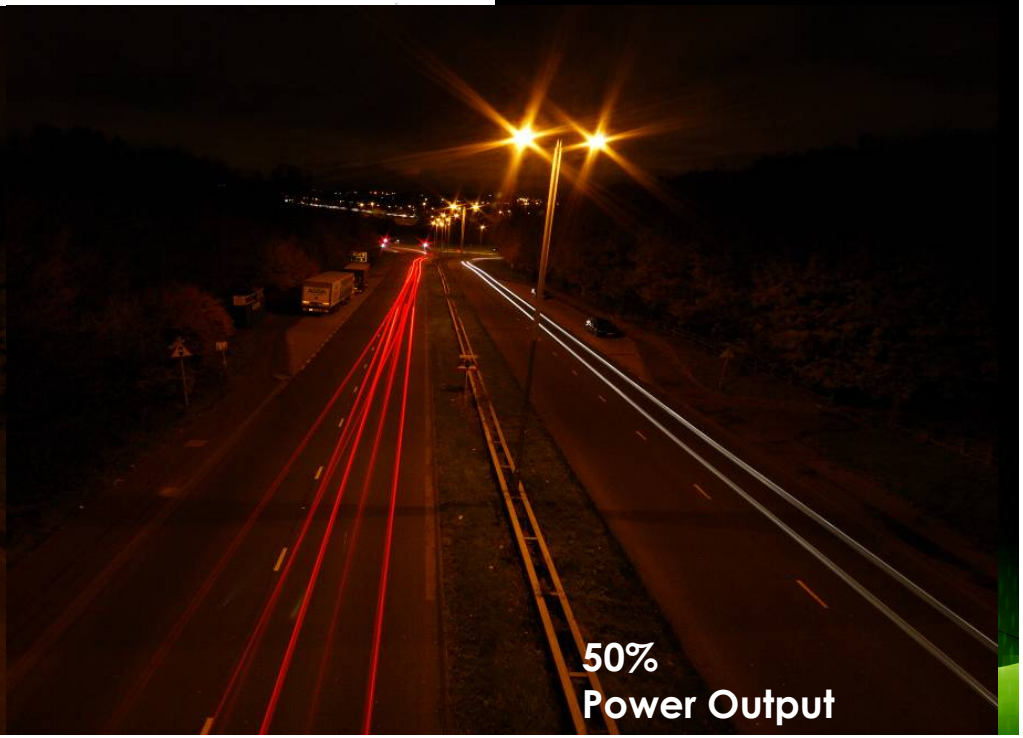
Daily Mail



WEDNESDAY. NOVEMBER 10. 2010 www.dailymail.co.uk 50p

NEW DARK AGE ON OUR STREETS





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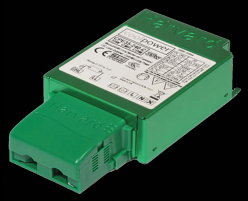
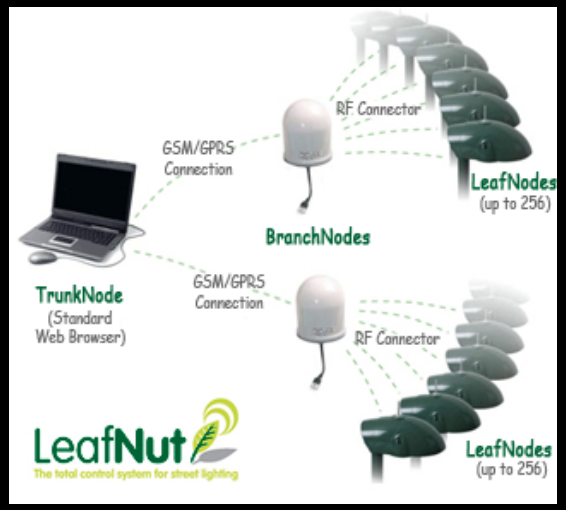


- Established in 1993
- Employs 155 people (20% in R&D)
- A world leader in the development and manufacture of electronic ballasts and control products
- HQ and factory in Leeds

LeafNut
The total control system for street lighting

2001
Development



2005
'The Launch'

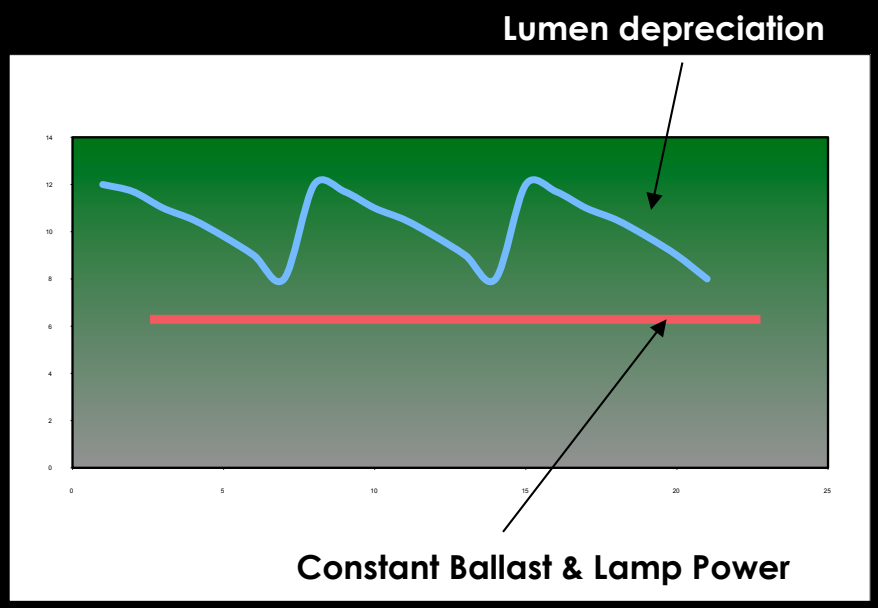
Now
Installations in over 40 locations, worldwide

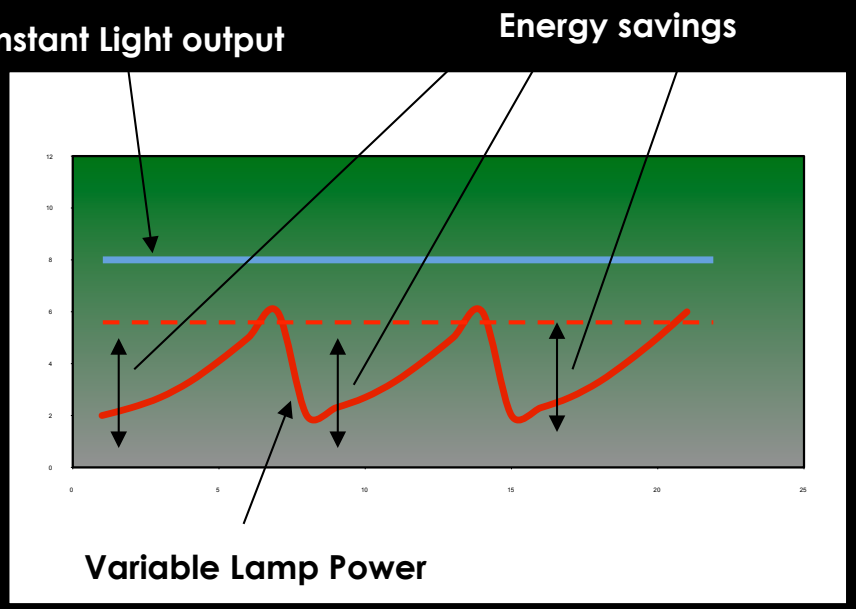
LeafNut at work

Westbourne Green, London, UK.

LeafNut
The total control system for street lighting

- **Maintenance Factor Harvesting**





- ✓ Save over 10% against standard electronic ballasts
- ✓ Add dimming and save up to 40%

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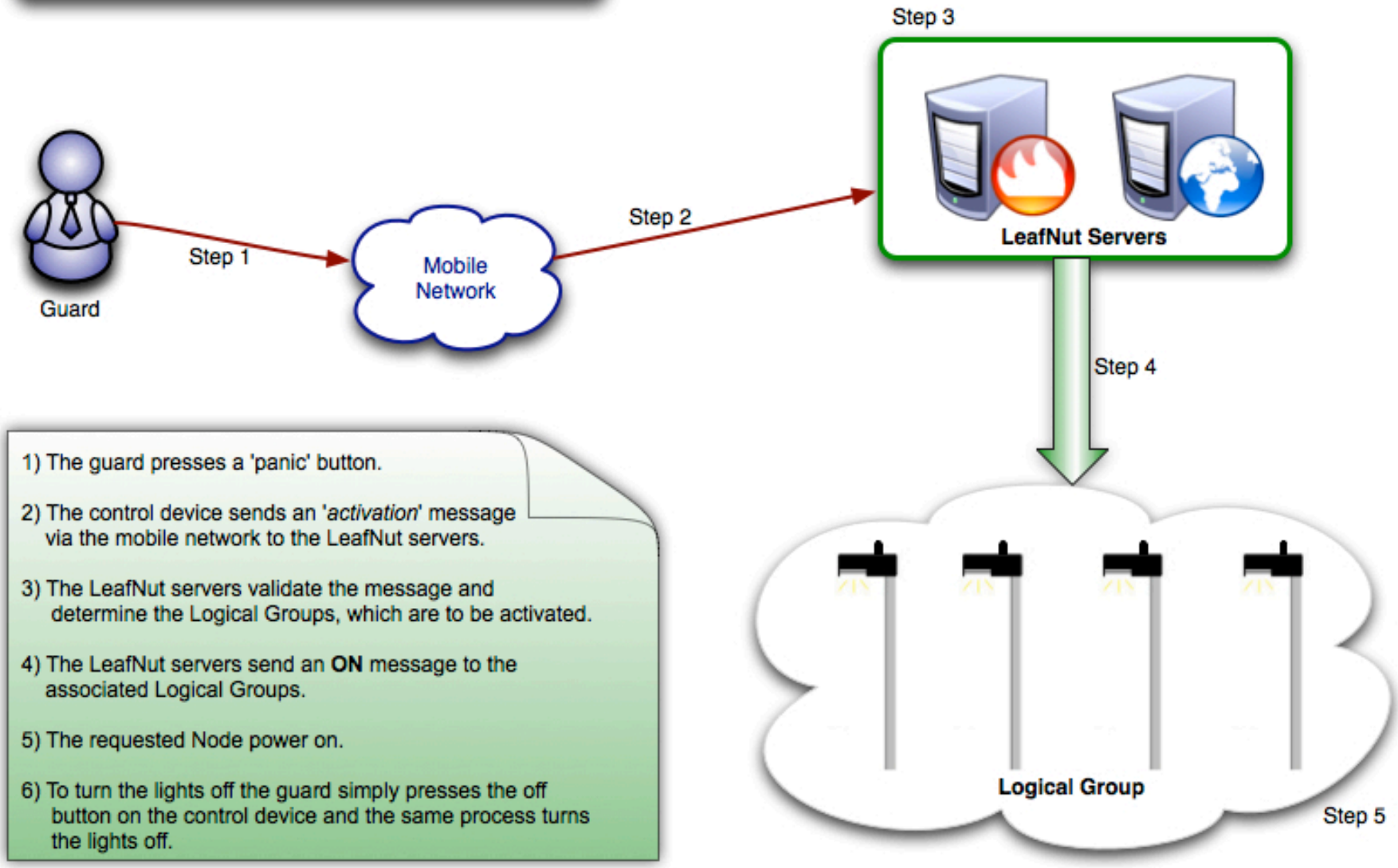
AMS Integration

LeafNut Remote Control Group Activation



1) The guard presses a 'panic' button.

2) The control device sends an '*activation*' message via the mobile network to the LeafNut servers.

3) The LeafNut servers validate the message and determine the Logical Groups, which are to be activated.

4) The LeafNut servers send an **ON** message to the associated Logical Groups.

5) The requested Node power on.

6) To turn the lights off the guard simply presses the off button on the control device and the same process turns the lights off.

Manage BranchNodes

http://localhost:8080/LeafNutAdmin/ShowGroundPlan.do?route=groundplan

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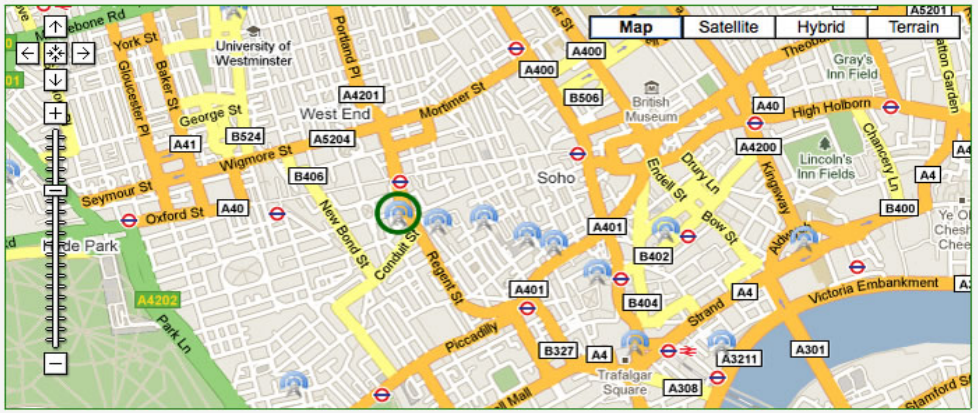
LeafNut
The total control system for street lighting

- User: scottb
- User Administration
- Network Maintenance
- Mapping Tools
  - Branch Ground Plan
  - Find Intersecting GPS Slots
- Profiles
- Logical Groups
- System Parameters
- BranchNode Manager
- Integration Management
- System Information
- Test Tools

Manage BranchNodes

Move Nodes | Delete | Edit | Edit Child | Edit SDP | Add | Status via Telnet | Audit Trail



BranchNode Definition

BranchNode Id:	2677
IP address:	10.3.0.38
Port number:	9000
Installation date:	4/12/2009
GSM signal strength:	

BranchNode Status

Current status: Active

BranchNode Location

Column Id:*	Photo-Branch
Street 1:*	GRH
Street 2:	

Done | FoxyProxy: Disabled | en-US

Deployment planning

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Electronics Engineers & Manufacturers

User: scottb

Logout
Home
About

User Administration
Network Maintenance
Mapping Tools

Branch Ground Plan
Find Intersecting GPS Slots
Import KML

Profiles
Logical Groups
System Parameters
BranchNode Manager
Control Devices
Integration Management
System Information
Test Tools

Branch Ground Plan

Planning Mode

On/Off ☑

Display Slot Range

All Slots ☑
Slot 0 ☑
Slot 9 ☑
Slot 18 ☑
Slot 27 ☑
Slot 36 ☑
Slot 45 ☑
Slot 54 ☑
Slot 63 ☑
Non SDP Slots ☑

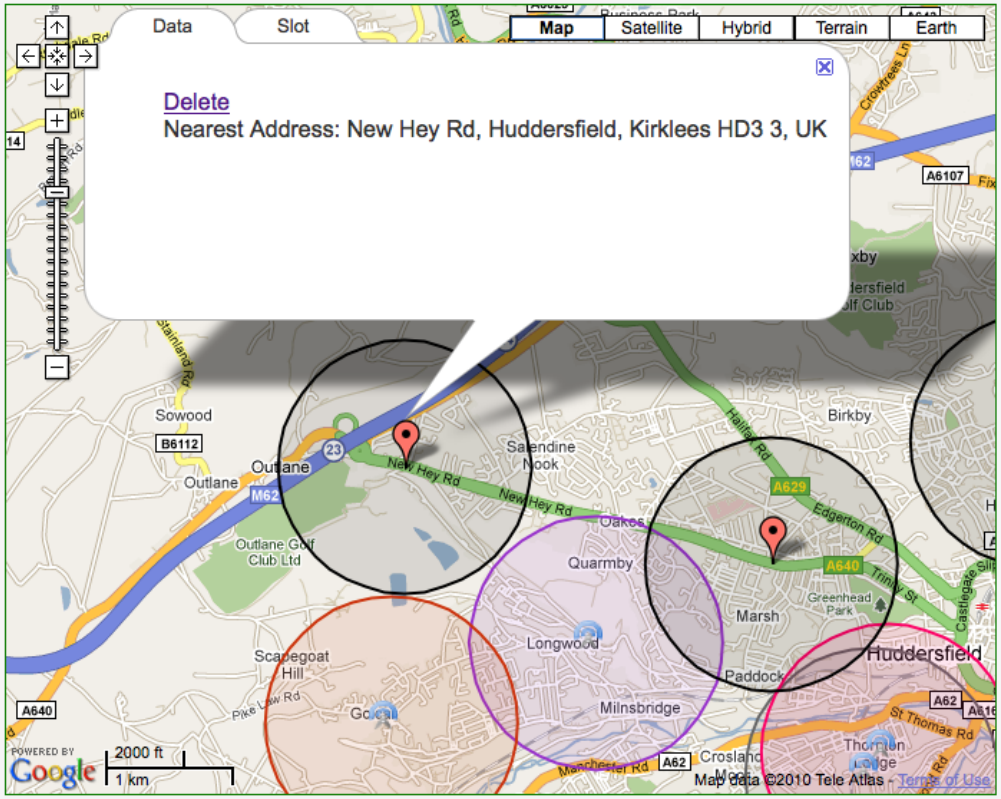
Slot Range Radius

Range Radius: 1km

Manage Branch Markers

Manage Branch(s): Open

Branches currently hidden: 0



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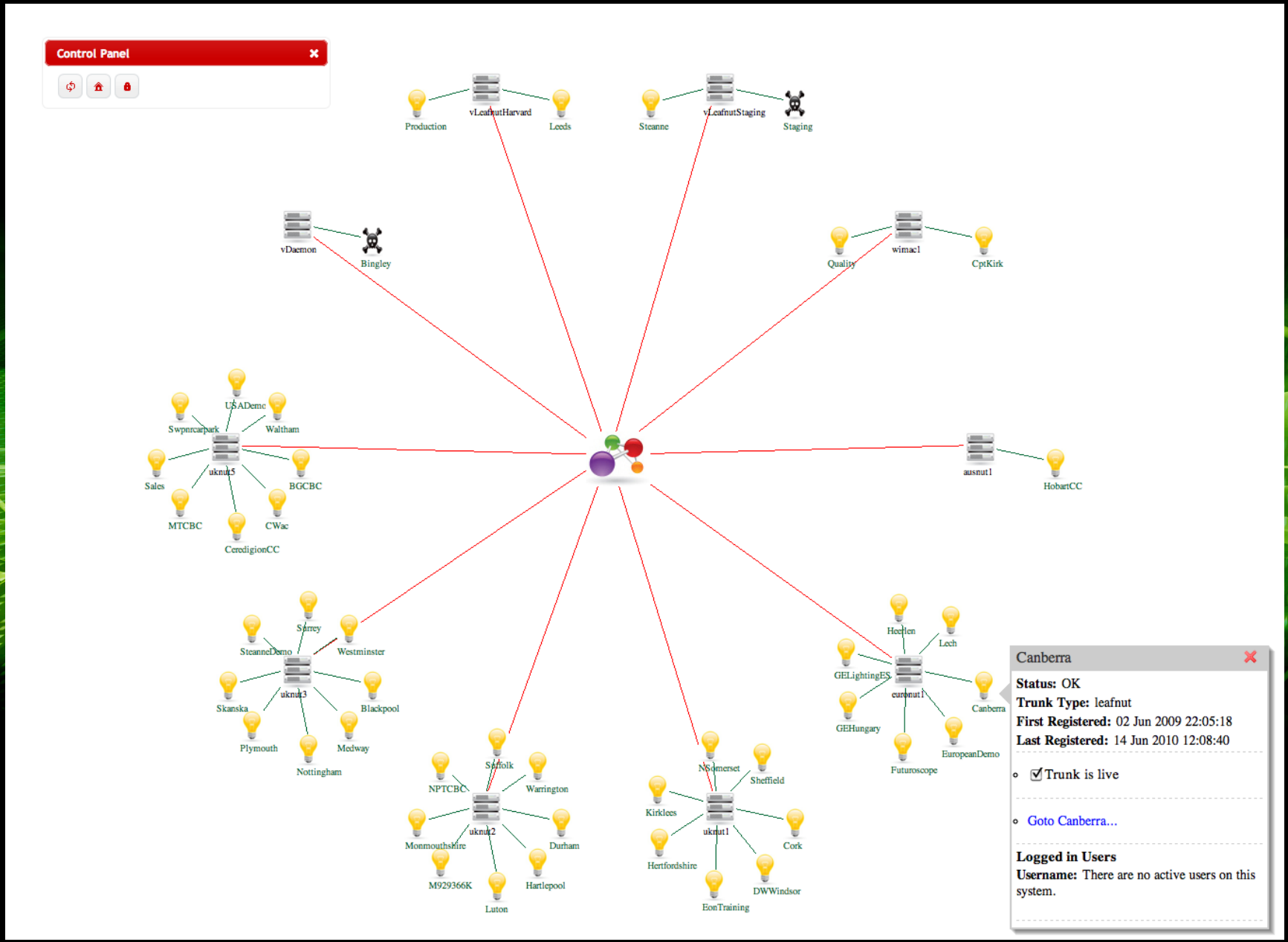
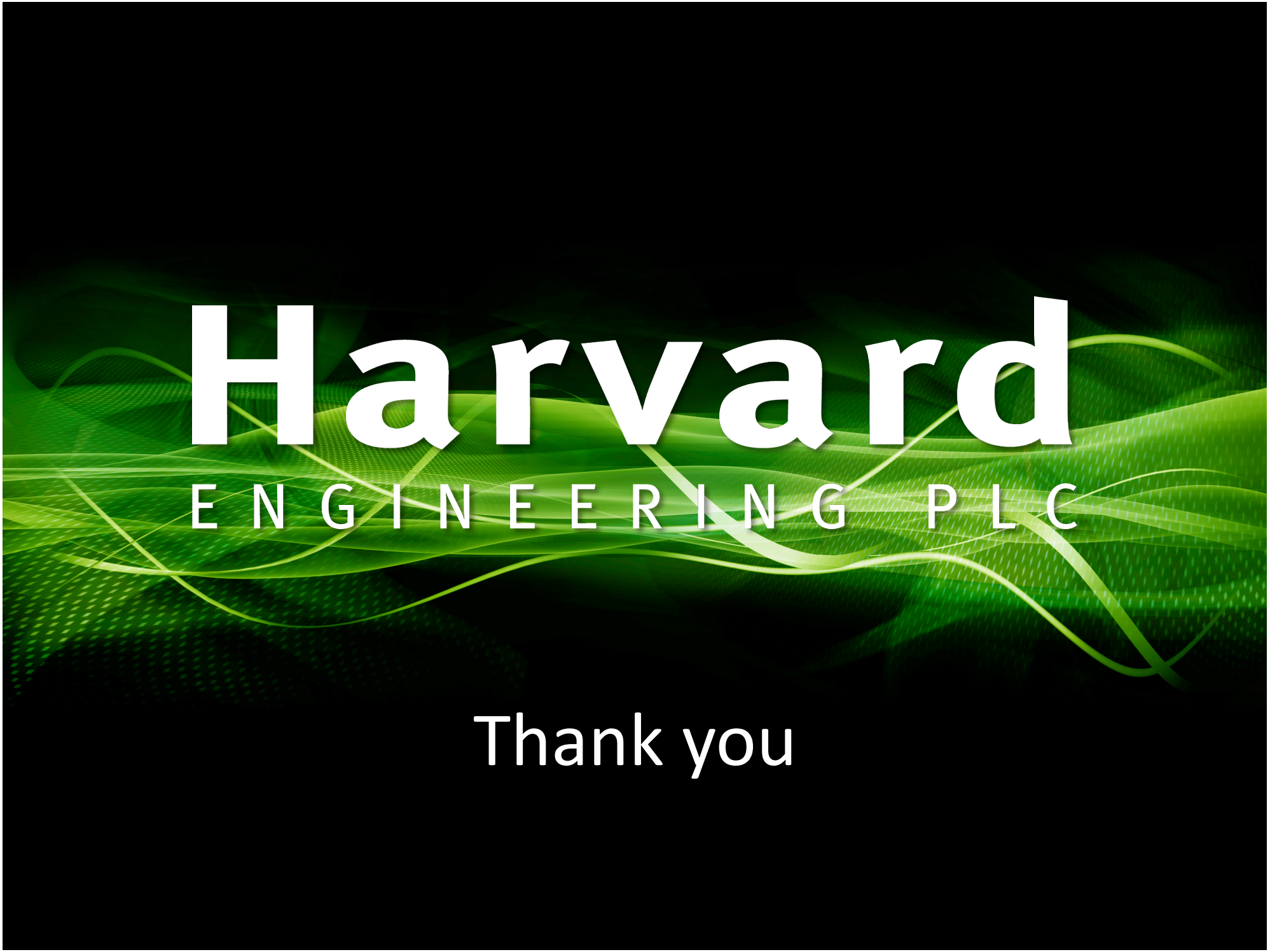
Security

- https://www.leafnut-host.net
  - 128 bit encrypted
  - Bank level security
  - Passwords not enough
  - Ethical hackers
  - Green Data centre
  - Dual hosting
  - WiMAC inventory manager

WiMAC Inventory Manager – TrunkNode status

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Thank you