

Open Source and the NHS

InControl

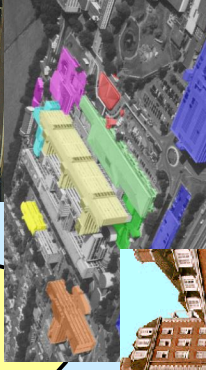
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Public Health Laboratory Service



Infection control for hospitals

The Problem:

- Hospitals need to control the occurrence and spread of infections
- Infections are often closely associated with antibiotic resistance
- The cost to the NHS of hospital based infections is now enormous
- The provision of information on this is now a key target

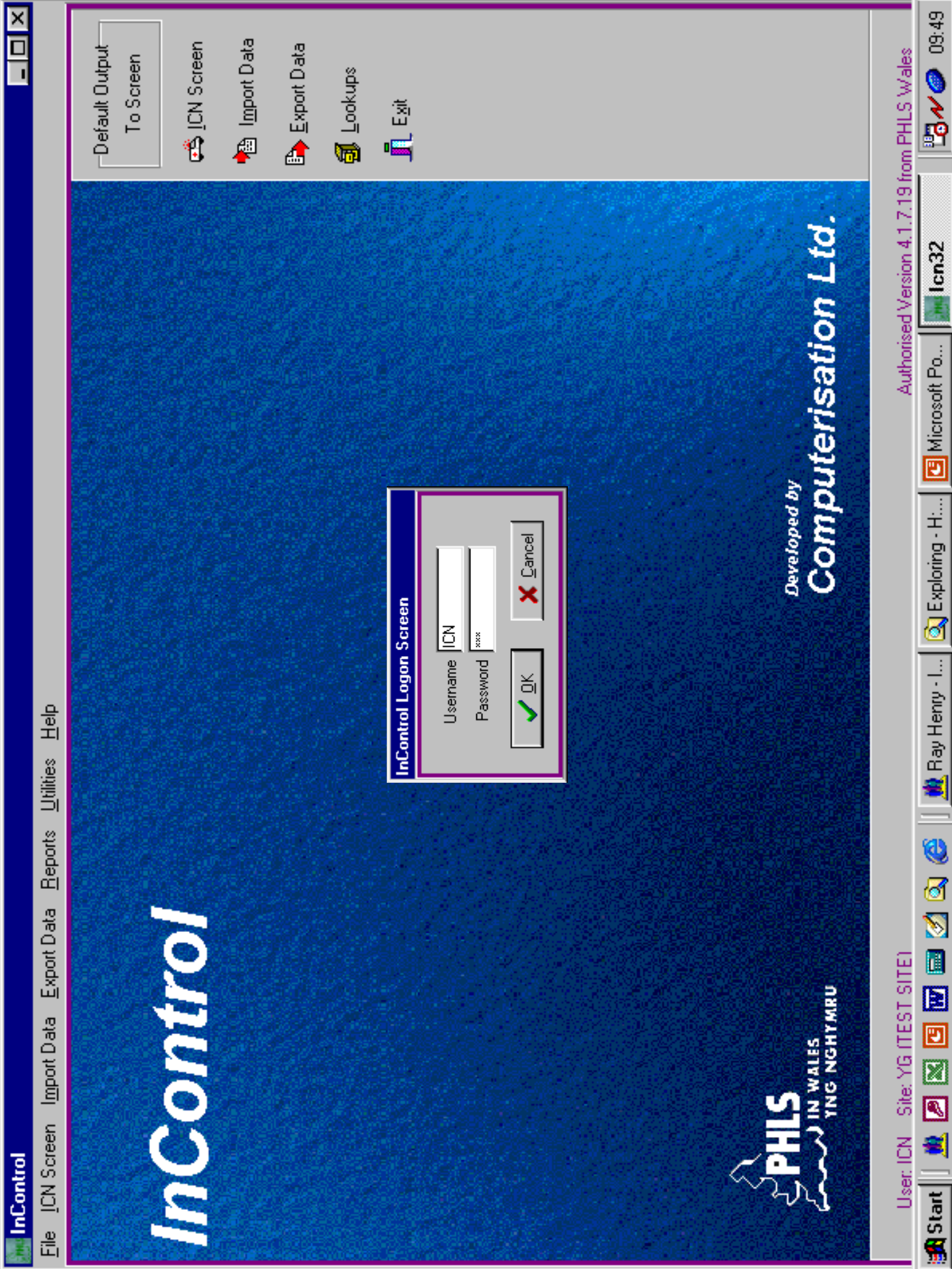


Infection control for hospitals

A new product: InControl

- No satisfactory commercial product was available
- PC based information system for infection control nurses
- Provides data for regional hospital infection surveillance
- Automated loading of laboratory results
- Developed by PHLS in Wales





InControl



Developed by
Computerisation Ltd.

InControl Logon Screen

Username

Password

- Default Output To Screen
- ICN Screen
- Import Data
- Export Data
- Lookups
- Exit

Authorised Version 4.1.7.19 from PHLS Wales

[AssFeaturesTable: Editing]



Hospital PID: X188888
 Firstname: JOE
 Surname: MOUSE
 Address: 35 CAE
 Sex: Male
 DOB: 28/03/1939
 MRSA Carrier:
 Post Code: GWYNEDD

Case Details | Alert Organisms | Alert Conditions | ICN Info | Misc

Organisms

Organism Code	Organism Name
SAUR	Staphylococcus aureus

Hospital Acquired



Cleared Date: [Dropdown] Ward Occured: [212] Sub Type Code: [Dropdown] Sub Type Description: [Text Box]

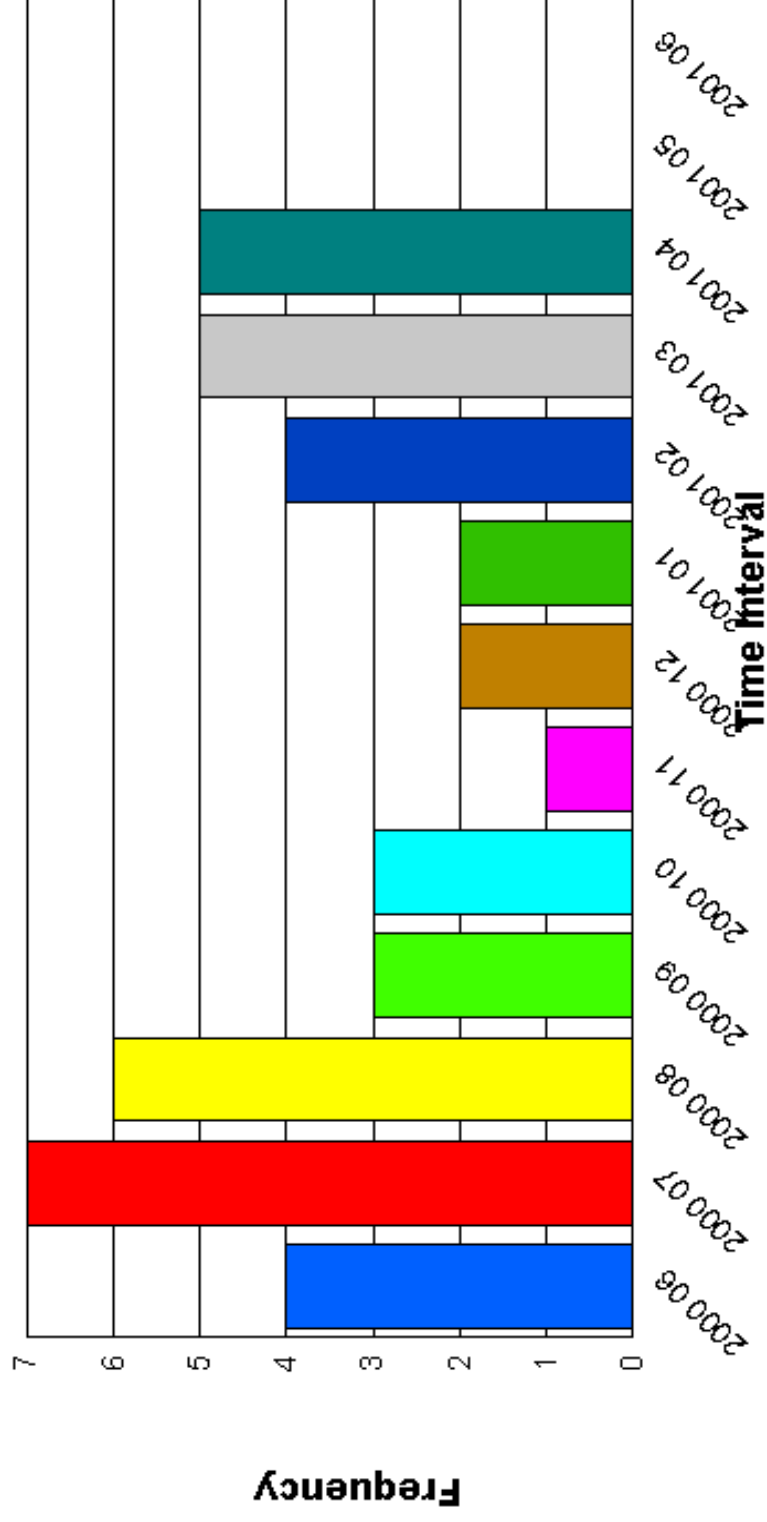
16 Associated Features For Organism No(1)

Code	Feature	Response	Source
IMI	IMPENEM	R	T
TET	TETRACYCLINE	S	T
AV	Assisted ventilation	YES	P
I CVC	Central intravascular device	YES	P

Test Results

Spec No	Result	Spec Date	Specimen Description	Screen Sample	Site Of Infection
M.97.0067779	P	06/04/2001	Wound Swab	<input type="checkbox"/>	

Report of Staphylococcus Aureus for Period
11/06/2000 to 11/06/2001
Ward ITU



InControl

Hospital Infection Control System

Key facts:

- Developed in 1997, and upgraded in 2001
- Developers are Computerisation Ltd
- Copyright is owned by PHLS
- Funded by the National Assembly for Wales
- Targeted at hospital infection control nurses
- Used as part of routine hospital infection management
- Can provide data for regional surveillance.



OpenSource.Org

Closed model

1. Internally developed programs are:
 - tied to the staff that developed them
 - affected by the loss of specialist staff, and recruitment problems
 - limited by the skill of those staff
 - unable to share development costs with other organisations
2. Vendor supplied programs are:
 - at the mercy of vendor – support fees and level of service
 - shackled to the strategic decision of the vendor
 - collapse of the vendor could damage your business

OpenSource.Org

Open source – the alternative

- Maximises the benefit from public sector investment
- Removes the monopoly position of the supplier
- A wider community of interest and skill base is generated
- Specialist interests can be pursued by other public sector organisations
- Promotes public private partnerships

OpenSource.Org

The General Public License

- Copyright of the program is held by the originator
- The licence grants free redistribution
- Assigned rights apply to the redistributed program
- Source code is included with the program
- Modification and derived work are allowed
- There is no warranty for the program
- The copyright holder is not liable for damages



Epinet would like to be 'first to market' with InControl, however we are free to invite other companies to compete alongside them – this may happen anyway!

Legal Advice

PHLS should produce its own licence



Areas of concern:

- PHLS Copyright
- Agreement on use and copying
- Liability issues
- Compliance with third party component licences
- Means of distribution

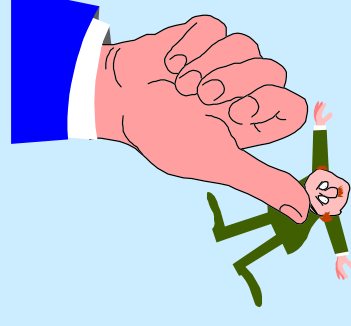
Liability issues

Main points:

- Free of charge and "as is" with no warranties
- Indemnify the PHLS against loss etc
in connection with third party use, or breach of third party component licences
- Concerns over consumer protection

Consequently distribution was:

- restricted to use in UK only
- restricted to NHS users
- available via the NHSnet Intranet only
- granted after registration of user details



Compliance with third party component licences

- InControl software was developed with 3rd party products:
[Delphi 4](#), [InfoPower](#), [Crystal Reports](#), and [WISE scripts](#)
- Only distributable runtime components required inclusion
- All standard practice in IT

The PHL S solicitors weren't convinced

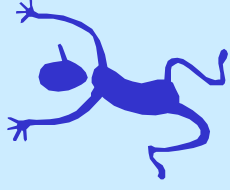
Consequently

PHLS had to:

- check all 3rd party distribution licences
- provide listings of each component that needed to be distributed
- check if any server components were used
- ask Computerisation to confirm PHLS copyright (and accept liability?)
- purchase each of the 3rd party software development packages
- build InControl from these software licences
- contact each of the third party suppliers to confirm legality of the proposed distribution

Currently we have:

- Finished product that is being used in hospital in Wales
- Draft licence for distributing InControl via the NHSnet
- another licence is required for distribution by CD
- and these will need amending when we update any 3rd party components – e.g. Delphi 4 to Delphi 6



Future issues

- Patches and fixes
How will these be distributed? - Intranet site
- Requests for upgrades
What if they do not align with the priorities of PHLS in Wales?
- Further developments
PHLS involvement? Ownership?
- Acceptance of new code
Quality assurance, approval by PHLS,
- **Further legal issues?**

