

Ingotec: IT for charities & NGOs

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with thanks to Joe Doupnik for
materials

ICTF conference July 2011

What is Ingotec?

Not for profit Community Interest Company, offering IT services to charities, NGOs and small businesses

Provides innovative and scalable solutions using a mix of open source and proprietary software

Sharing of expertise, services and infrastructure is environmentally friendly, green, and cost effective

In the beginning...

Intentions

Improve IT service for charities

Offer services through an appropriate company

Implement proof of concept systems

Show both commercial and free offerings for handling email, local file storage, web services, etc

Allow customers to make a choice (usually based on budget)

Guiding principles

Convey IT expertise to charities and similar orgs

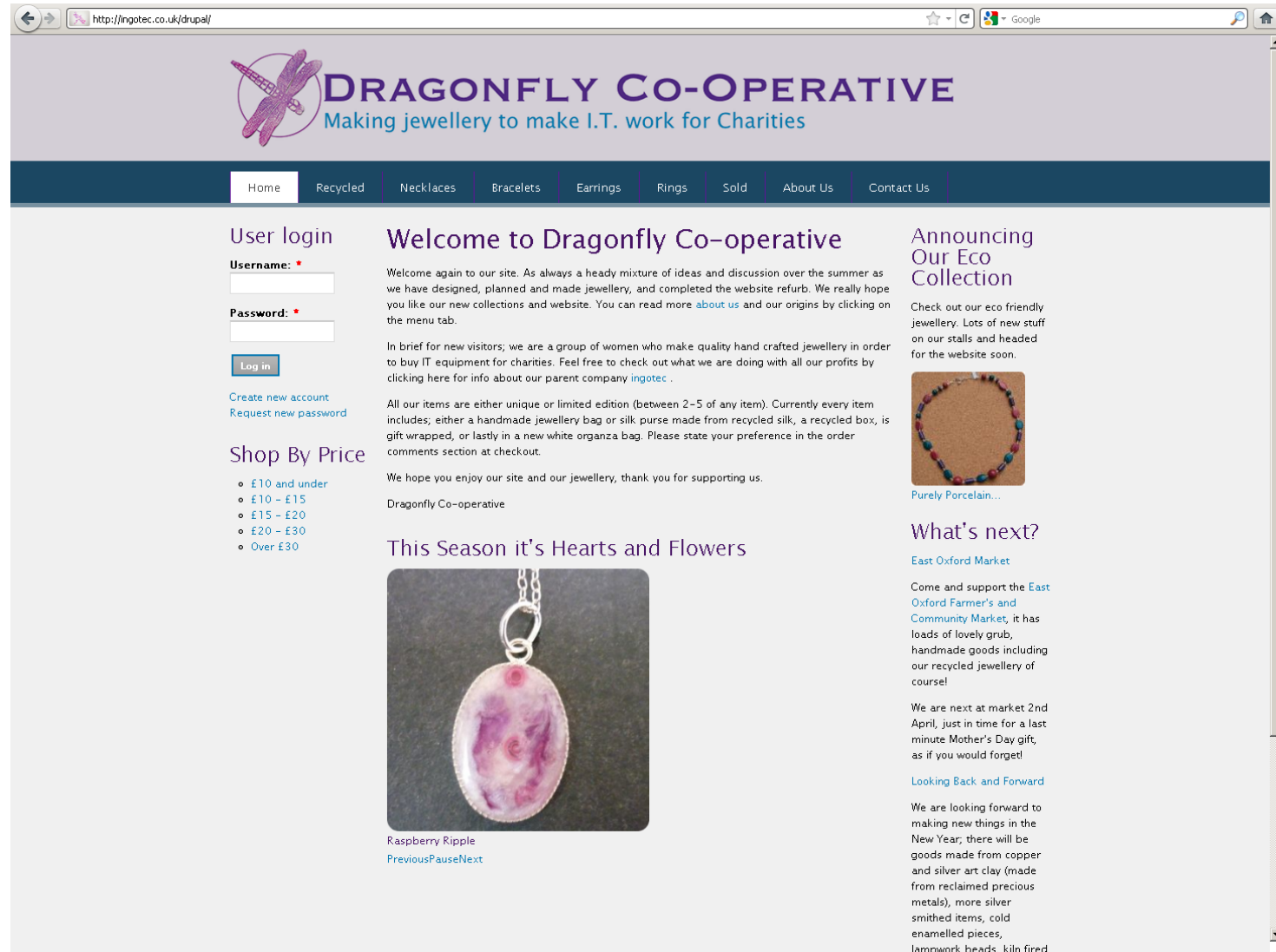
Build and partly manage facilities on their behalf

Operate as a formal company so that the work has a solid basis, long term continuity and governance

Commercial support is required to fund operations

Recycle financial gains back into the business, to fund new developments

Dragonfly an associated project



The screenshot shows a web browser window displaying the Dragonfly Co-operative website. The browser's address bar shows the URL <http://ingotec.co.uk/drupal/>. The website header features a purple dragonfly logo and the text "DRAGONFLY CO-OPERATIVE Making jewellery to make I.T. work for Charities". A navigation menu includes links for Home, Recycled, Necklaces, Bracelets, Earrings, Rings, Sold, About Us, and Contact Us. The main content area is divided into three columns. The left column contains a "User login" section with fields for Username and Password, a "Log in" button, and links for "Create new account" and "Request new password". Below this is a "Shop By Price" section with a list of price ranges: £10 and under, £10 - £15, £15 - £20, £20 - £30, and Over £30. The middle column has a "Welcome to Dragonfly Co-operative" section with a welcome message and a brief description of the group. Below this is a section titled "This Season it's Hearts and Flowers" featuring a large image of a purple heart-shaped pendant. The right column contains an "Announcing Our Eco Collection" section with a description of eco-friendly jewellery and a small image of a necklace. Below this is a "What's next?" section with text about upcoming markets and future projects.

http://ingotec.co.uk/drupal/

DRAGONFLY CO-OPERATIVE
Making jewellery to make I.T. work for Charities

Home Recycled Necklaces Bracelets Earrings Rings Sold About Us Contact Us

User login

Username: *

Password: *

Log in

[Create new account](#)
[Request new password](#)

Shop By Price

- £10 and under
- £10 - £15
- £15 - £20
- £20 - £30
- Over £30

Welcome to Dragonfly Co-operative

Welcome again to our site. As always a heady mixture of ideas and discussion over the summer as we have designed, planned and made jewellery, and completed the website refurb. We really hope you like our new collections and website. You can read more [about us](#) and our origins by clicking on the menu tab.


In brief for new visitors; we are a group of women who make quality hand crafted jewellery in order to buy IT equipment for charities. Feel free to check out what we are doing with all our profits by clicking here for info about our parent company [ingotec](#).

All our items are either unique or limited edition (between 2-5 of any item). Currently every item includes; either a handmade jewellery bag or silk purse made from recycled silk, a recycled box, is gift wrapped, or lastly in a new white organza bag. Please state your preference in the order comments section at checkout.

We hope you enjoy our site and our jewellery, thank you for supporting us.

Dragonfly Co-operative


This Season it's Hearts and Flowers



Raspberry Ripple
[PreviousPauseNext](#)

Announcing Our Eco Collection

Check out our eco friendly jewellery. Lots of new stuff on our stalls and headed for the website soon.



Purely Porcelain...

What's next?

[East Oxford Market](#)

Come and support the [East Oxford Farmer's and Community Market](#), it has loads of lovely grub, handmade goods including our recycled jewellery of course!

We are next at market 2nd April, just in time for a last minute Mother's Day gift, as if you would forget!

[Looking Back and Forward](#)

We are looking forward to making new things in the New Year; there will be goods made from copper and silver art clay (made from reclaimed precious metals), more silver smithed items, cold enamelled pieces, lampwork beads, kiln fired...

General dispatch web page



Ingotec Web Facilities

User Services

[eGroupWare suite](#)

[Change password](#)

[Simple webmail client](#)

Administration

[User provisioning](#)

[RT administration](#)

[Admin's password changer](#)

[eGroupWare Setup](#)

[MySQL admin](#)

[Web statistics](#)

[CMS configuration](#)

Who are we?

We are a not for profit organisation offering IT services to Charities, NGOs and small businesses.

We aim to provide innovative and scalable solutions to meet the needs of our customers using a mix of open source and proprietary software.

We provide services to a group of charities who whilst retaining thier individual identities share a common infrastructure.

Sharing expertise, services and infrastructure is both environmentally friendly and cost effective.

For more information please visit [our web site](#)

For assistance please contact the postmaster at this site, or send email to rt-email at this site to generate a problem ticket.



LDAP directory goals

Modern flexible directory for user credentials and similar information

Support a variety of third party applications

POSIX compatibility, Samba support

Tools to configure and maintain the directory (which turned out to be a large problem)

Automatic synchronisation between machines

Major Services Offerings

Samba SMB
file server

Dovecot IMAP4
mail server

eGroupWare
application suite

Drupal Content
Mgmt System

Postfix SMTP
mail server

Password/email
web self service

Simple webmail

WebDAV

↑ User services

↓ Management services

User p/w & email
settings

Web based user
provisioning

phpMyAdmin
MySQL config

RT help desk
service tickets

OpenLDAP user
identity directory

Awstats web
log file reader

SSH, Telnet,
FTP for
managers

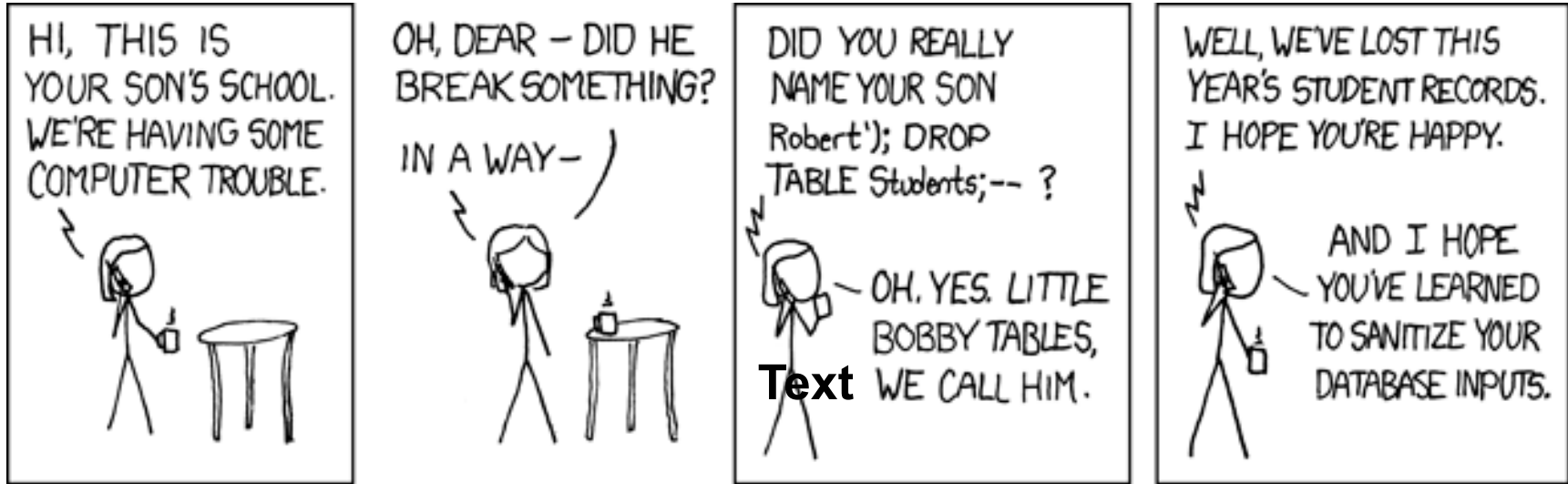
Apache Studio
LDAP editor

SWAT SMB
web control

OpenSUSE Linux

Hot spare server

Ring any bells?



Would the IT Officer who...

LDAP directory for user identity

Apache
Directory Studio
LDAP editor

Webmin scripts
for web based
user provisioning

Passwd change,
web, POSIX and
Samba p/w sync

↑ Web based administration

↓ Linux system internals

Samba suite
file server

smbpasswd

Idapsmb: config
app, touches
POSIX passwd

OpenLDAP v3.4
directory server

OpenLDAP client

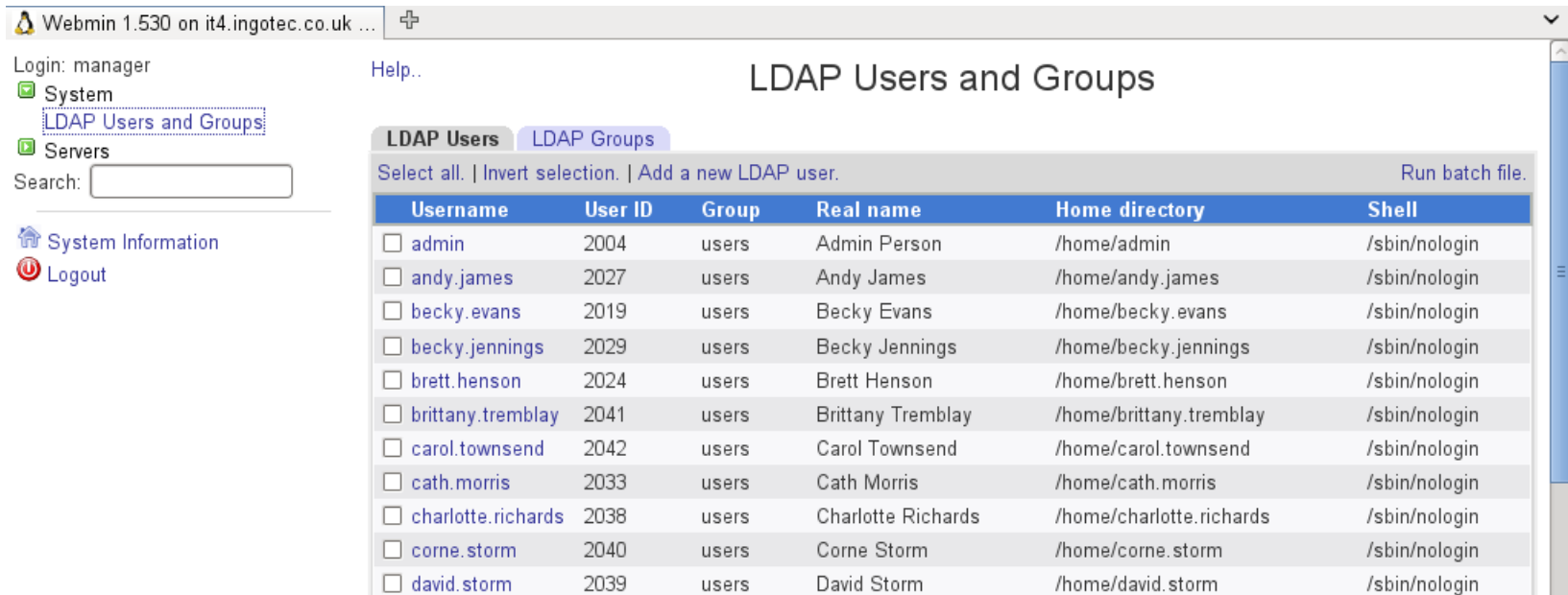
Idapsearch et al
LDAP utilities

3rd party
applications

Schema files
POSIX, Samba

sldappasswd
POSIX only

Webmin, heavily modified



Webmin 1.530 on it4.ingotec.co.uk ...

Login: manager

System

LDAP Users and Groups

Servers

Search:

System Information

Logout

LDAP Users and Groups

LDAP Users | LDAP Groups

Select all. | Invert selection. | Add a new LDAP user. Run batch file.

Username	User ID	Group	Real name	Home directory	Shell
<input type="checkbox"/> admin	2004	users	Admin Person	/home/admin	/sbin/nologin
<input type="checkbox"/> andy.james	2027	users	Andy James	/home/andy.james	/sbin/nologin
<input type="checkbox"/> becky.evans	2019	users	Becky Evans	/home/becky.evans	/sbin/nologin
<input type="checkbox"/> becky.jennings	2029	users	Becky Jennings	/home/becky.jennings	/sbin/nologin
<input type="checkbox"/> brett.henson	2024	users	Brett Henson	/home/brett.henson	/sbin/nologin
<input type="checkbox"/> brittany.tremblay	2041	users	Brittany Tremblay	/home/brittany.tremblay	/sbin/nologin
<input type="checkbox"/> carol.townsend	2042	users	Carol Townsend	/home/carol.townsend	/sbin/nologin
<input type="checkbox"/> cath.morris	2033	users	Cath Morris	/home/cath.morris	/sbin/nologin
<input type="checkbox"/> charlotte.richards	2038	users	Charlotte Richards	/home/charlotte.richards	/sbin/nologin
<input type="checkbox"/> corne.storm	2040	users	Corne Storm	/home/corne.storm	/sbin/nologin
<input type="checkbox"/> david.storm	2039	users	David Storm	/home/david.storm	/sbin/nologin

Web based, menu organised, role restricted

Create, delete, modify user accounts

Batch facility

**Full LDAP attributes, populate home directory,
email, sync all passwords**

Webmin, user details menu

Module Index

Edit User

User Details

User's LDAP DN uid=admin,ou=users,o=ingotec UINFO:uid=admin,ou=users,o=ingotec
LDAP object classes posixAccount,shadowAccount, person, sambaSamAccount, inetOrgPerson

Username

User ID

First name

Last name

Real name

Home directory Automatic ...

Shell ...

Password

No password required
 No login allowed
 Normal password
 Pre-encrypted password
 Login temporarily disabled

Password Options

Password changed 29/Jan/2011 Expiry date / / ...

Minimum days Maximum days

Warning days Inactive days

Group Membership

Primary group ...

Secondary groups

All groups

In groups

User capabilities

Samba login? Yes No

Mail domain

Upon Save..

Move home directory if changed? Yes No

Change user ID on files? No Home directory All files

Change group ID on files? No Home directory All files

Modify user in other modules? Yes No

One spot LDAP user provisioning

Includes both POSIX and Samba, automatic UID #, home directory, email, p/w, etc

Password self-service, via web

Change Password and Email Address

User ID (username)

Current Password

New Password

New Password (again)

New Email Address

(Empty "New" fields mean no change)

If your current password has been forgotten
please contact the administrator at this host

For users

Change passwords and/or email address

Password Administrator

Allow an administrator to change a user's password and email address

Administrator LDAP DN

Administrator Password

User ID (username)

New Password

New Password (again)

New Email Address

(Empty "New" fields mean no change)

LDAP kind (uid, cn, sn)

LDAP search base

For administrators

eGroupWare suite of apps

Home Preferences Manual / Help Logout **Joe Douppnik** - Sunday 20-Mar-2011 Current users: 0 Add ...

E GROUPWARE Stylite's Community Version 1.8

Admin Home eMail Calendar Resources Addressbook freeChat ProjectManager MyDMS Filemanager Website News Admin Logout

Home

More apps

Calendar - Weekview: Joe Douppnik: Week 11: 14 - 20 March 2011

	Monday 14.	Tuesday 15.	Wednesday 16.	Thursday 17.	Friday 18.	Saturday 19.	Sunday 20.
09:00							
10:00							
11:00							
12:00							
13:00							
14:00							
15:00							
16:00							
17:00							
18:00							

News

eGroupWare Services

Email

Document Management System

Sharable file storage

WebDAV to file storage

Calendar

Mobile device sync

Address books

Bookmarks

Chat

User credentials are held in the LDAP directory

eGW & Drupal details are held in the MySQL database

Web pages

News feeds

Resource scheduler

Project management

Time sheet

Wiki

Knowledge Base

Polls

Ticket tracking system

Infolog (doc collections)



IngoTec
Adding IT to NGOs

What's in the box?



8gb Corsair Memory

1TB Western Digital SATA HDD

Asus 90-MIB770-G0EAY00Z - M4A78 PRO AM2+ AMD780G ATX VGA+SND
+GLN+U2 HT5200 SATA2R IN

AMD HDX810WFGIBOX - AMD Phenom II X4 (810) 2.6GHz 4x512KB L2
Cache Socket AM3 Processor

Total approximately £370 and does the job

eMail additional features

Accepts mail for several email domains

Maildir mailboxes to permit nested subdirectories

ClamAV + Amavis elementary anti-virus scanning of mail flowing in and out

SSL connections throughout, except for port 25

Prevent outsiders guessing usernames: shunt mail for unknown usernames to “notausers” dummy user

Activity logs are scanned by fail2ban to block guessing and other bad behaviour

As we go along

Develop and field a full featured solution

Train customers on getting the most from a system

Build small staff of volunteers to assist

Reproduce and tailor the core for other customers

Look at fresh problems, find possible solutions

Samba SMB file serving

Offer file serving, as personal and group shares

Least change to unmanaged client machines

Avoid MS Domains as that forces unnecessary complexity and tethers client machines to a server

Limit access to the local site because of Internet security concerns with the SMB protocol

Next step: a backup system

Build and prove a hot spare server (clone of active)

On site, not clustered, but available at short notice

Private comms link for synchronisation, Internet connectivity switched on/off manually

Sync LDAP and MySQL databases

Rsync all user and important system files

Essentials?



Block Internet intruders

Apache

Restrict sensitive apps to specific IP ranges

Require user credentials to specific applications

Record activities to log files

IPtables

Selective access to services, block repeated failures,
block stray scans

Fail2ban

Monitor logs, impose temporary blocks in IPtables

Disconnect MySQL from the network

Protect access to OpenLDAP

Limit SSH/Telnet/FTP to certain IP ranges and usernames

Ordinary users have no direct access into Linux (no login shell etc)

Finally

We need to find small businesses with a small budget...

And some more volunteers..