

R-Shared: A Collaborative Platform for R Code Development and Sharing

8th March 2011



Agenda

- Overview
- Projects that Inspired ...
 - ModSpace
 - Commercial R Support
- Introducing LondonR Ltd!
- The R-Shared Platform
- Summary
- Questions

Overview

Overview

- More teams starting to use R in commercial situations
 - How do these people communicate?
 - Central knowledge sharing
- IT teams needing to work with R:
 - Improve performing with use of hardware
 - Control R versions and packages

Overview

- R used for more and more vital decisions
 - More focus on validation/verification
 - Code control and versioning
- Support framework needed as user base increases
 - R-Help fantastic but not commercial focus
 - Commercial training & support becoming more important

Overview

- Today I will present Mango's "R-Shared" platform
- Builds on other Mango projects
- A "concept" at this stage





Projects that Inspired ...

ModSpace


- Built for Novartis, but owned by Mango
- Knowledge Management system that:
 - Understands the difference between “code” and other files (e.g. documents)
 - Backed by version control system
 - Uses the high performance “Lucene” search
- Used heavily at Mango




Bookmarks


-  *Unpublished Items (1)*
 -  Mango "Introduction to R" Training Course
- +  My Entries
- +  My Groups

News | Reminders(1) | Dashboard

 [New entry : Automated R installation script for Linux](#)
Installs R 2.10 and pre-requisites for rjava, and all required packages for PME 2.4.

step-07-04.sh installs R
step-07-06.sh installs all R libraries
R installation scripts used in PME, installs R and R packages.
Mike Creed, 08-Mar-11 12:08PM

 [New entry : Logging Module for Bash Installation](#)
A modular script that provides logging functionality, which can be included in bash scripts to provide the following:
- api for creating logs: DEBUG, INFO, ERROR, FATAL
- Termination of a proce...
Useful logging script for bash installation script - writes to console and log file, displays errors in colour.
Mike Creed, 08-Mar-11 12:03PM

 [New entry : NONMEM 6 and 7 installation scripts](#)
Installation scripts used by PME to automate the installation of NONMEM 6 and 7. These are modular scripts that can be called with parameters to determine default and custom sizes.

The PME install...

Modspace

[Advanced Search](#)

Search Categories

- + Element Type
- + Libraries
- + Owner
- Author
 - Richard Pugh(56)**
 - Francisco Gochez(3)
 - Alexander Patt(2)
 - Chris Campbell(2)
 - Danielle Wang(2)
 - more ▾
- + Name
- + Content
- + Added Date

Search Results

Results 1 - 10 of 56 for boxplot

	Name	Last Modified	Score ▾
	Forest Research R Training 2010 Chapter 04 - Producing Graphics.doc Richard Pugh	03 Jun 2010	3%
	ACOP Graphic Scripts newBoxplotFunction.R Richard Pugh	16 Feb 2011	2%
	R for Actuaries 6.TraditionalGraphics.doc Richard Pugh	20 Feb 2011	2%
	Pfizer 5 Day S-PLUS Training 2004 Chapter8.doc Richard Pugh	29 Jun 2010	2%
	Pfizer 5 Day S-PLUS Training 2004 Tip Sheet.doc Richard Pugh	29 Jun 2010	1%
	Abbott Intermediate S-PLUS Training 2007 Tip Sheet.doc Richard Pugh	29 Jun 2010	1%
	GSK Webinars for S and R (2008 - 2010)		



Modspace

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Entry Contents





- Useful R functions
 - mango_theme.R
 - memory_size.R
 - speeds.R

Overview | Related | History

Name	Useful R functions
Author	Chris Campbell
Description	<p>R memory management seems to be quite good. However, code should be created to make best use of RAM. This function shows the time cost of stretching (cbinding to) a vector rather than populating a planned matrix.</p> <p>This entry now also includes a Mango branded lattice theme and relative speeds of apply, ifelse, factors and subsetting</p>
Assumptions	R
Projects	Not applicable
Keywords	R, memory, lattice
Language	S, R

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Entry Contents

-  Useful R functions
 -  mango_theme.R
 -  memory_size.R
 -  speeds.R

[Overview](#) [File Preview](#) [History](#)

```
mango.theme <- function(safe = FALSE) {
  mango.palette <- matrix(c(
    c("#F99B0C", "#E8112D", "#00A3DD",
      "#D36BC6", "#C49977", "#00C993"),
    c("#FF9900", "#CC0000", "#0099FF",
      "#996699", "#CC9966", "#66CC99")),
    ncol = 2, dimnames = list(c("Solutions", "CRM", "Finance",
      "Pharma", "Sensory", "Energy"), c("True", "Safe")))
  # define Mango colours
  column <- 1
  if(safe) {column <- 2}
  # toggle true or browser supported colours
  mango.hsv <- rgb2hsv(col2rgb(mango.palette[1:6, column]))
  mango.hsv[2, ] <- 0.3
  mango.light <- hsv(h = mango.hsv[1, ], s = mango.hsv[2, ],
    v = mango.hsv[3, ])
  # create vector of lightened colours
  # saturated colours influence perception of data

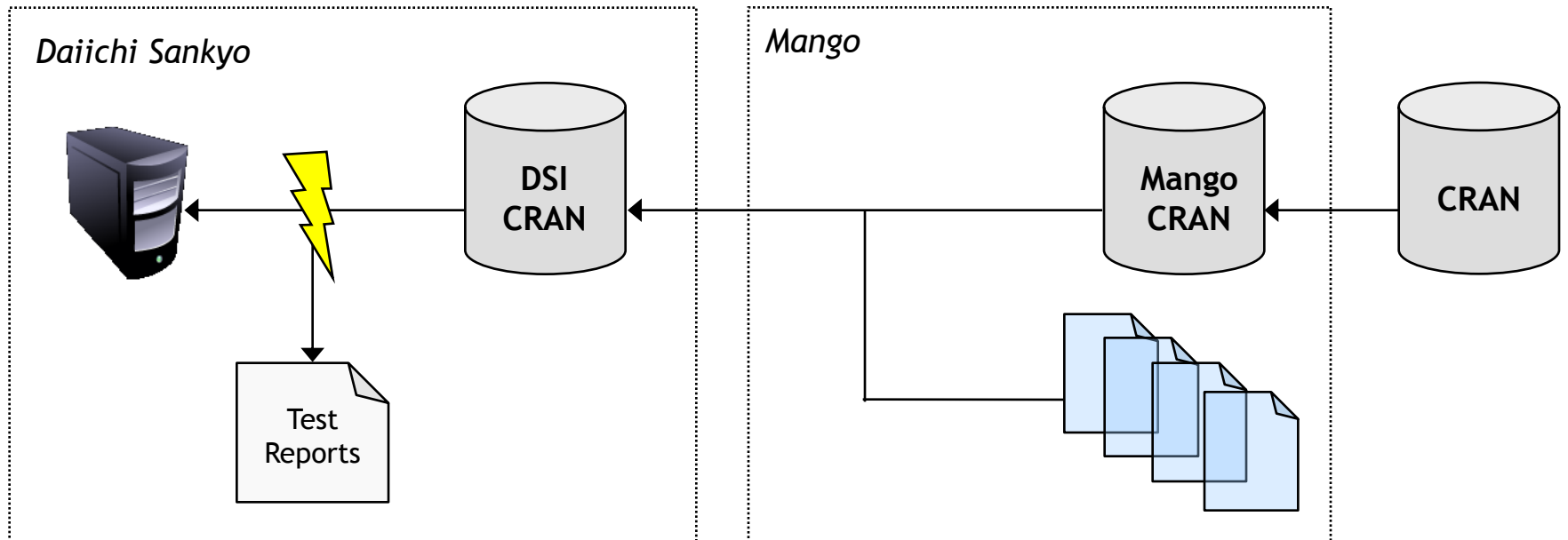
  par <- col.whitebg()

  # show.settings() row 1
  par$superpose.symbol$col <- mango.palette[c(6:1, 6), column]
  par$superpose.line$lty <- rep(1, 7)
  par$superpose.line$col <- mango.palette[c(6:1, 6), column]
  par$strip.border$col <- "black"
```

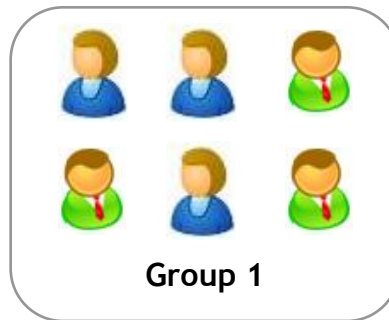
Daiichi Sankyo

- Ongoing Commercial R Support
- Provision of “validated” R build
- Optimisation of R performance
- Performance of regression testing to provide evidence of verification

Daiichi Sankyo



Introducing LondonR Ltd

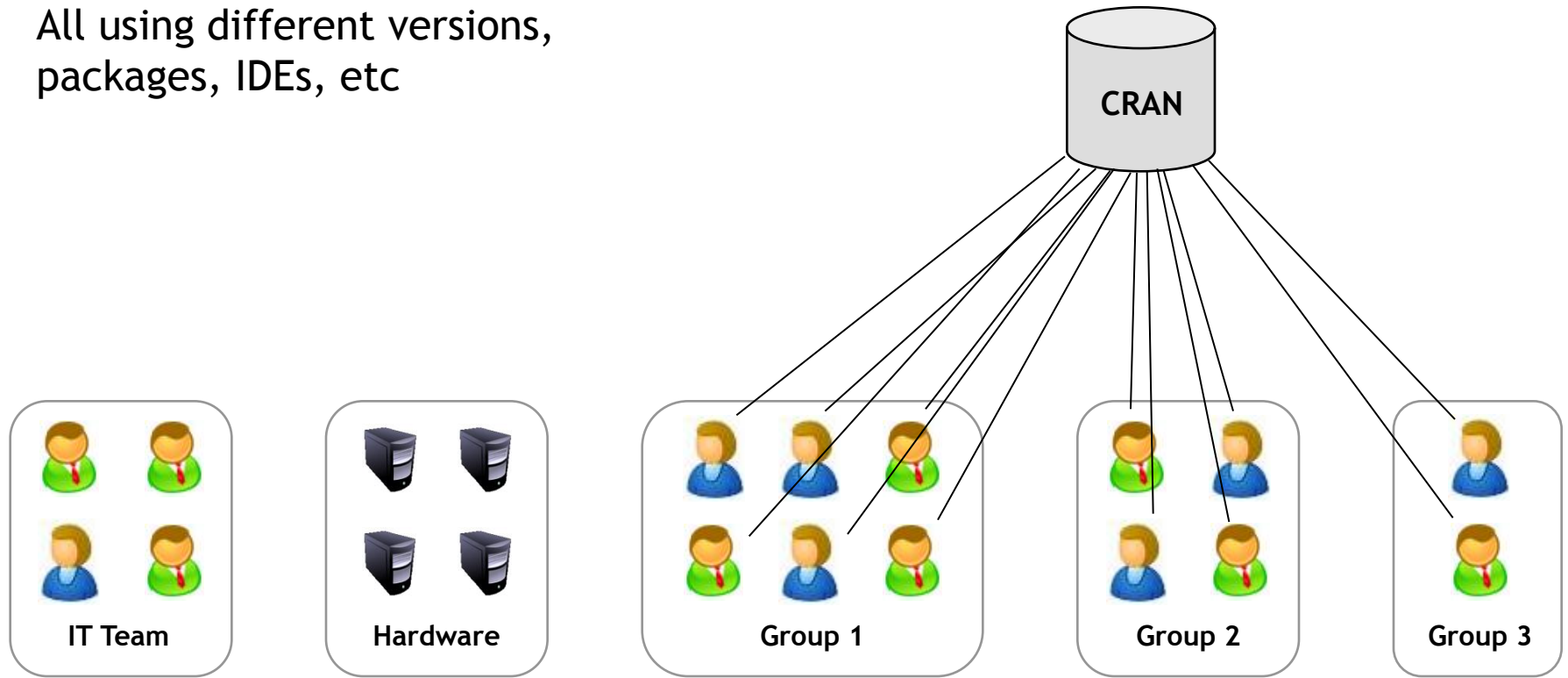


R User Community at LondonR Ltd

Where do they get R?

Most CRAN

All using different versions,
packages, IDEs, etc

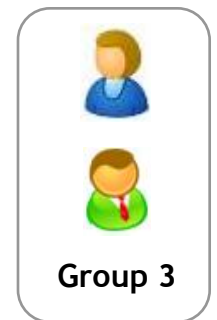
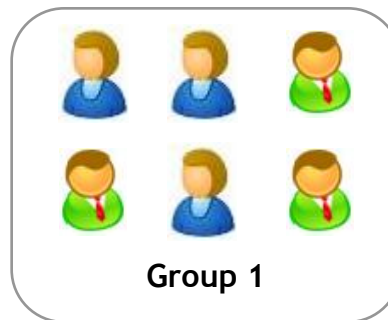


R User Community at LondonR Ltd

Where did they get help?

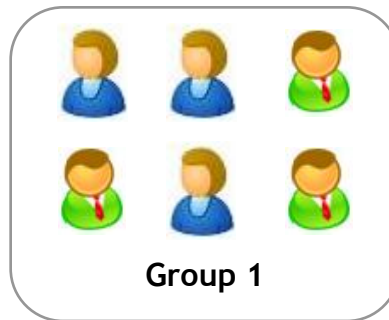
R-Help sometimes

Otherwise they ask each other



R User Community at LondonR Ltd

How about that package that Bob wrote!
Sent around via email
Code maintained on Bob's machine or R-Forge
Everyone has different versions



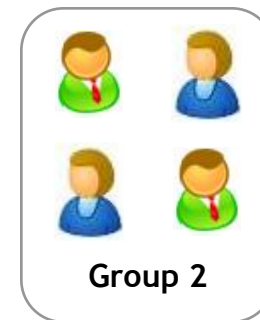
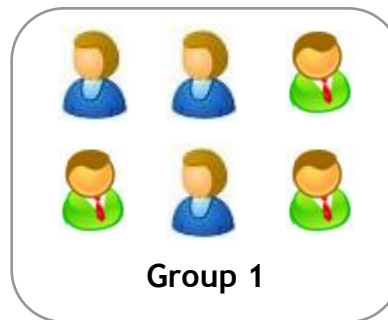
R User Community at LondonR Ltd

Where do they get training?

Group 1 had a private training course from Mango

Someone from Group 2 went on a public course

Others are self taught



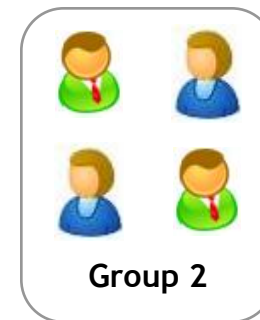
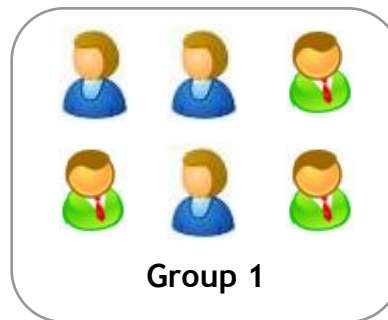
R User Community at LondonR Ltd

Where is their code?

On their own machines mostly

Emailing of scripts

Server to put some code but somewhat disorganised



R User Community at LondonR Ltd

How about some IT support?

IT team is excellent, but don't know R and are not analysts

R is open source, which adds concern

Worried about installing on central servers

They google for commercial support and don't find a lot ...



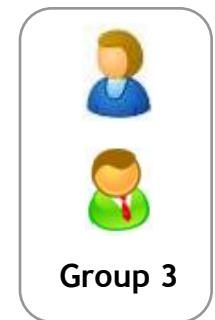
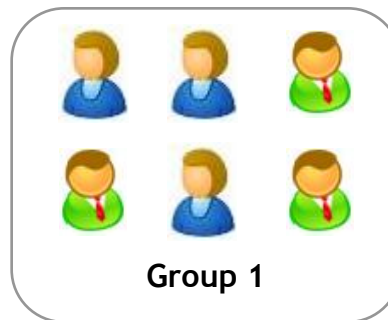
R User Community at LondonR Ltd

How do the teams communicate?

They don't really (no-one even knows about Group 3)

Sometimes see questions on R-Help

Other potentially see them at LondonR or other events



R User Community at LondonR Ltd

The R-shared Platform

The R-shared Platform

- Integration of the ModSpace software with DSI structures
- On development path at Mango for *May 2011*
- Looking for interested parties to get involved



myR Search [Advanced Search](#)

Folder Delete Edit Entry Group Template Preferences Get R Support

My Favourites

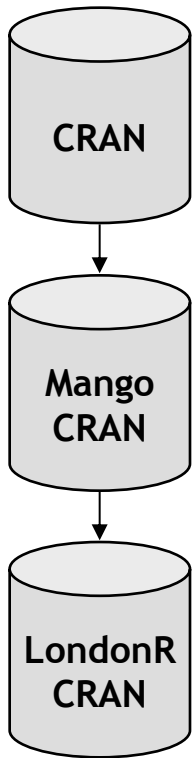
- My Entries
- My Groups

Questions

- How do I calculate the risk of an asset within R?
Posted by rpugh on 1st Feb 2011 [See 8 responses](#)
- Does anyone have a script to create a boxplot using the mean as the mid-point of the box instead of the median?
Posted by mcreed on 10th Jan 2011 [See 4 responses](#)

News | Reminders(1) | Dashboard

- New R Package: ggplot2 v1.0.1 now available for use**
Hadley's Wickhams ggplot2 library has now been tested and is available for download
Richard Pugh, 1st Feb 2011 15:30pm
- Feedback: Interactive Graphic Windows**
"Really good video Mike - got any more you can post?" ★★★★★
Jonathan Chard, 30th Jan 2011 10:01am
- New R Training Entry: Interactive Graphic Windows**
Video showing how to set your graph windows to be interactive, allowing you to scroll through plots within the R environment
Michael Creed, 29th Jan 2011 16:05pm
- New Entry: Scripts for Risk Assessment**
Set of basic scripts that can be used to perform a variety of risk assessment tasks
Michael Creed, 29th Jan 2011 15:34pm



Where do they get R?

myR Search Advanced Search

Folder Delete Edit Entry Group Template Preferences **Get R** Support

My Favourites

- My Entries
- My Groups

News Reminders(1) Dashboard

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IT Team

Hardware

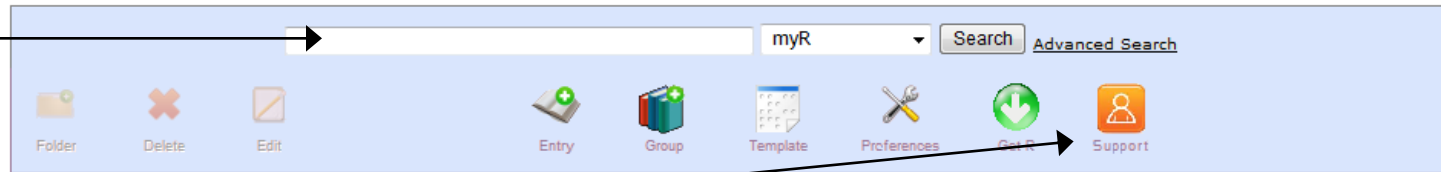
Group 1

Group 2

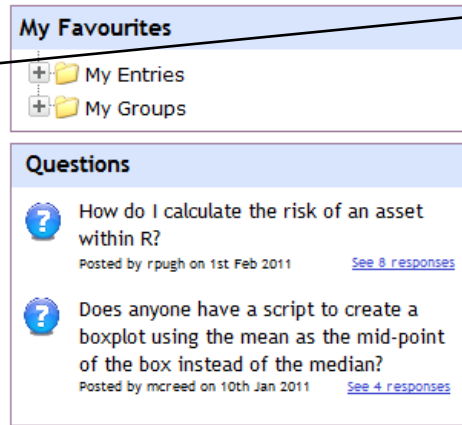
Group 3

Where do they get Help?

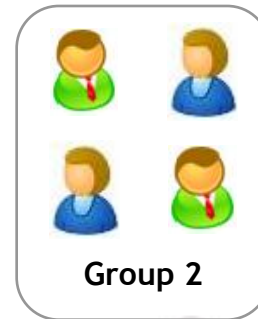
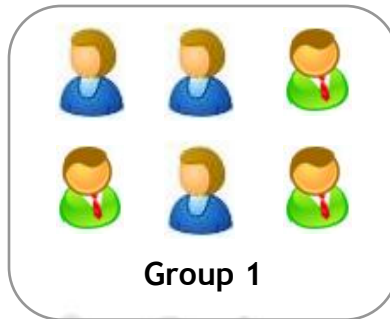
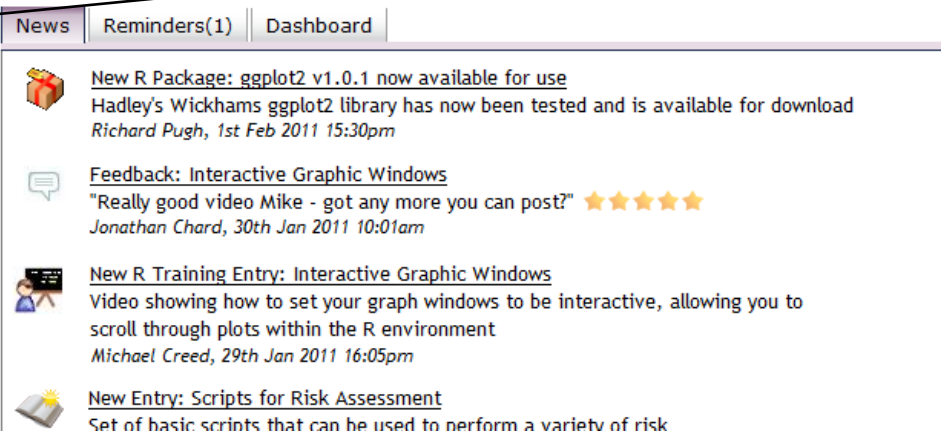
Search for an answer



Ask Mango a question



Internal Q&A



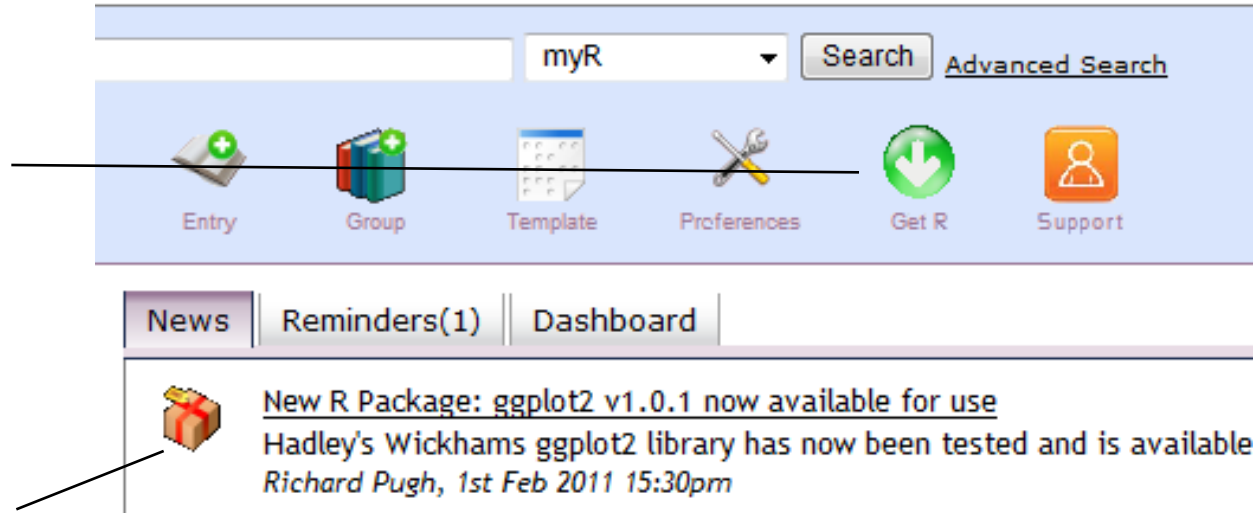
How about that package that Bob wrote!

It lives in
ModSpace

Can be
downloaded

Can be further
developed by everyone
with access


Updates are announced
in R-Shared




IT Team



Hardware



Group 1



Group 2

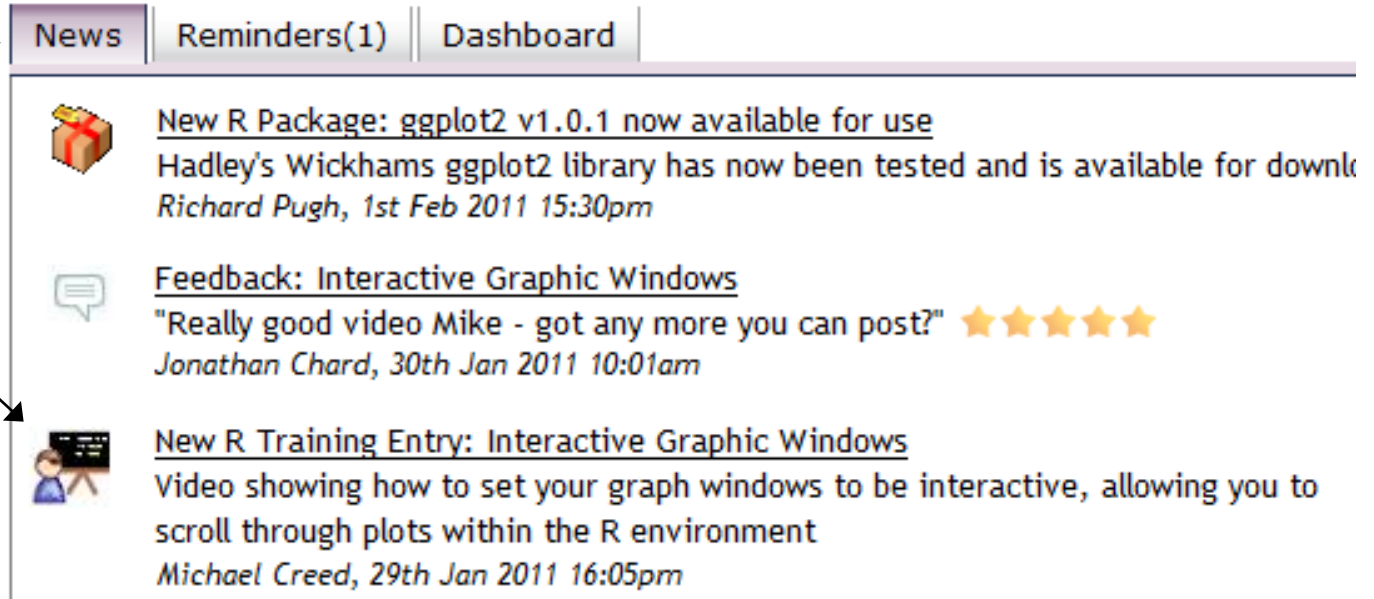


Group 3


Where do they get training?


Training announcements part of news feed


Training materials stored in R-shared



News | Reminders(1) | Dashboard

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Michael Creed, 29th Jan 2011 16:05pm



IT Team



Hardware



Group 1



Group 2



Group 3

Where is their code?

In R-shared, so stored in version control system

Entry Contents

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 - speeds.R

Overview | **File Preview** | History

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    ncol = 2, dimnames = list(c("Solutions", "CRM", "Finance",
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  # create vector of lightened colours
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  par <- col.whitebg()
}
```



IT Team



Hardware



Group 1



Group 2



Group 3

How about some IT support?

IT users have admin and management interfaces

Bookmarks

- + Unpublished Items (1)
- + My Entries
- + My Groups
- + Recently Viewed

News | Reminders(1) | **Dashboard**

Add Item | Download

entsovertime

Date	Total entries	Added in month
01 Apr 2010	0	0
01 May 2010	0	0
01 Jun 2010	5	5
01 Jul 2010	15	15
01 Aug 2010	35	25
01 Sep 2010	60	35
01 Oct 2010	70	15
01 Nov 2010	70	0
01 Dec 2010	75	5
01 Jan 2011	80	5
01 Feb 2011	85	0
01 Mar 2011	90	10

Edit | Remove

System Administration

Configure Elements

Manage Users

Configure Analysers

Manage Data Dictionary

Audit Trail

IT Team

Hardware

Group 1

Group 2

Group 3

How do the teams communicate?

Using “groups” within R-shared and view news feed

Group Contents

- R and S-PLUS Training
 - Finance Courses
 - General Courses
 - PK Courses
 - Pharma-but-not-PK Courses
 - Public: Introduction to R
 - Useful R Resources

Overview | News | History | Members

Updated group : R and S-PLUS Training
A central point for discussion around and access to R/S Training materials
Updated with 3 or 4 new courses
Richard Pugh, 20-Feb-11 08:44PM

Updated entry : PSI Webinars 2011
PSI Webinars presented in 2011
added some meta info
Richard Pugh, 20-Feb-11 08:43PM


New entry : PSI Webinars 2011
PSI Webinars presented in 2011
PSI Webinars: Just Simulation one so far
Richard Pugh, 20-Feb-11 08:42PM

Updated entry : J&J Training Materials Jan 2011
Training Materials used for the J&J course in Beerse, taught by Rich in Jan 2011
Updated following the course to add scripts, code generated, list of attendees etc
Richard Pugh, 20-Feb-11 08:39PM

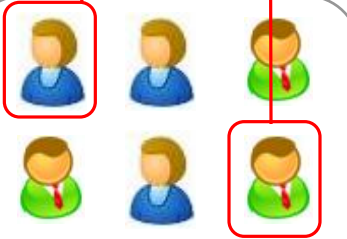
Updated entry : Centocor R for PK Training August 2010
Materials used in the Centocor R for PK Training course, taught by Richard Pugh in



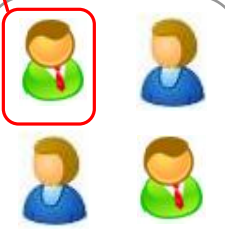
IT Team



Hardware



Group 1



Group 2



Group 3

Summary

Summary

- R-shared Platform in development (although there isn't a lot to do!)
- Should be available May/June 2011
- Looking for companies who want to get involved at this stage

Questions