



IBM Linux Client Update

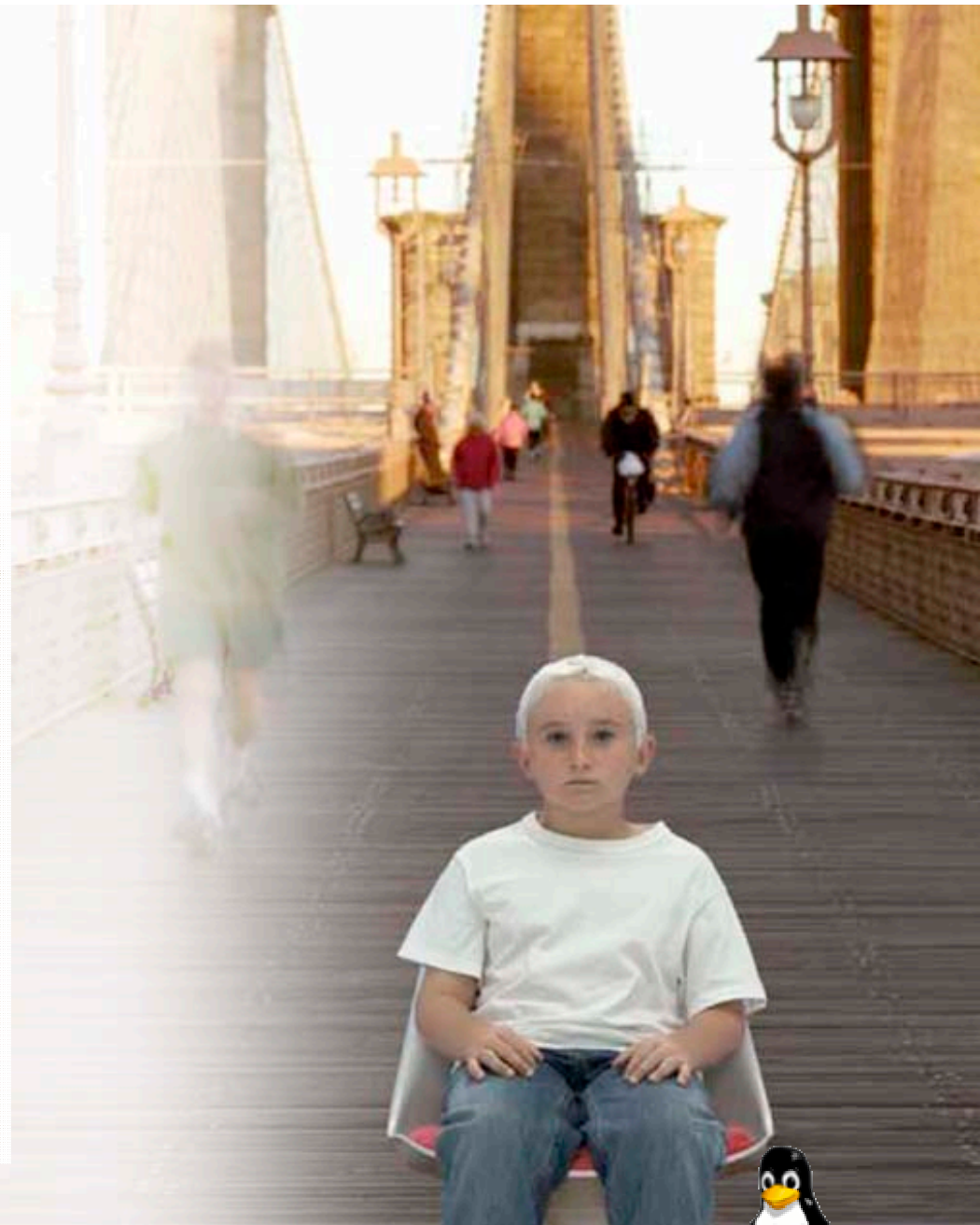
June 23, 2004

Scott Handy
VP, Worldwide Linux Strategy and Market Development
IBM Corporate Linux

Timothy Kounadis
IBM Workplace Team
Lotus Software

Overview

- The Linux Client Market
- The IBM Client Strategy
- What do we have to offer ?
- IBM Workplace - Tim Kounadis
- Summary



IDC Forecast : Linux Desktop - May 2004

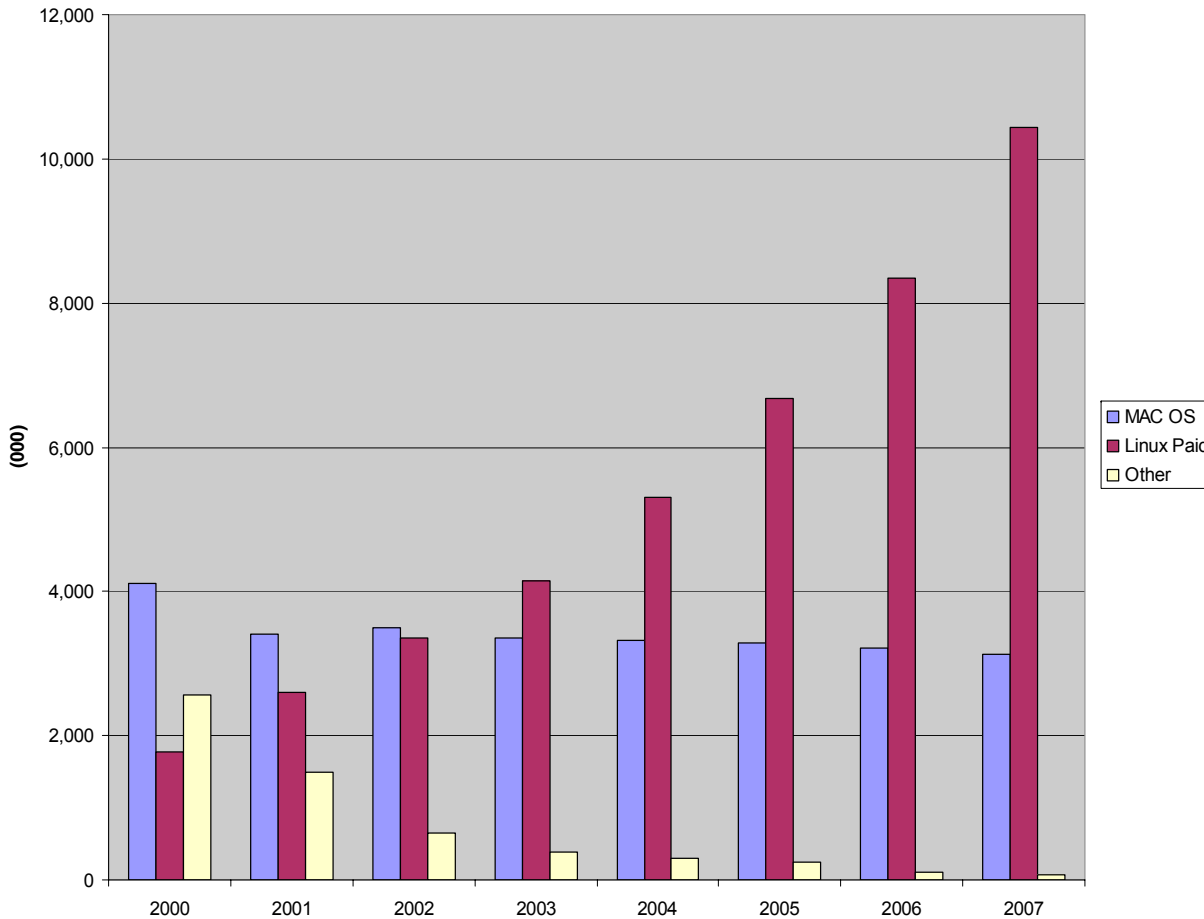
- The Linux client operating environment new license shipments
 - Projected Growth 2002 – 2007 (Worldwide)

*CAGR of 25.4 %

Linux is 2.7% of the existing desktop share

Microsoft has 94.5% of the existing desktop share

- Linux on the desktop is projected to attain 6% of the client Operating System market share by 2007



Linux Client Growing at a CAGR of 25.4%

Clients - Linux has the highest growth and took over as # 2 ahead of the MacOS in 2003

The Linux client install base will triple from 2003 to 2007

	2000	2001	2002	2003	2004	2005	2006	2007	2002-2007 CGR (%)
Windows	96,205	103,200	113,800	121,197	130,287	140,840	150,699	160,494	7.1%
MAC OS	4,109	3,408	3,491	3,352	3,318	3,285	3,219	3,123	-2.2%
Linux Paid	1,782	2,595	3,363	4,150	5,309	6,671	8,345	10,431	25.4%
Other	2,560	1,490	655	385	307	251	100	75	-35.2%
Total	104,656	110,693	121,309	129,084	139,221	151,047	162,363	174,123	7.5%

* Source IDC, August 2003 #30159

Why an IBM Client Strategy is the lead message

- **IBM's client strategy has been and will continue to be a customer driven strategy and not a technology driven strategy**
- **A heterogeneous platform story that is all about flexibility and choice**
- **Windows, Linux, MAC, and pervasive (hand held & headless devices)**
 - More internet connected devices are non-PC than PC
- **Linux is simply now a part of the larger strategy**

Role Based Client Segmentation: One size does not fit all

Fixed Function	Technical Workstation	Transactional Workstation	Basic Office	Advanced Office
Limited use of business applications		Applications which drive business processes		
Limited office productivity	Simple office productivity		Advanced office productivity	
No e-mail	Simple e-mail		Advanced e-mail	
No instant messaging	No instant messaging		Instant Messaging	
Simple browser access to Intranet, portals			Advanced browser access to Internet	
File/Print systems management, network access, host emulation				

Examples:

Fixed function: ATMs, airline boarding pass kiosk, point-of-sale terminals

Technical: Engineers using CAD/CAM, movie animation studios

Transactional: Travel agents, bank admin personnel, front office staff

Knowledge: Heavy MS Office™ use, productivity apps, "hi-fi" exchanges

General: Advanced office, multiple applications, custom apps

Linux may be right for the business fundamentals of today

Fixed Function	Technical Workstation	Transactional Workstation	Basic Office	Advanced Office
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Current Customer Desktop Pain Points

- **The cost of adding a Windows desktop is not justifiable for all user types**
Many end users simply do not require a full MS Windows desktop.
- **Current licensing practices** are major expense and source of dissatisfaction for many
- **Frequent security patches and virus alerts** increase administrative costs
- **End user productivity losses** due to viruses and worms
- **Added complexity** requires more administration
- **Required upgrades** that carry more function than needed by users

Bottom line: customers want to reduce desktop TCO

On-Demand Client: TCO Comparison – Linux and Windows

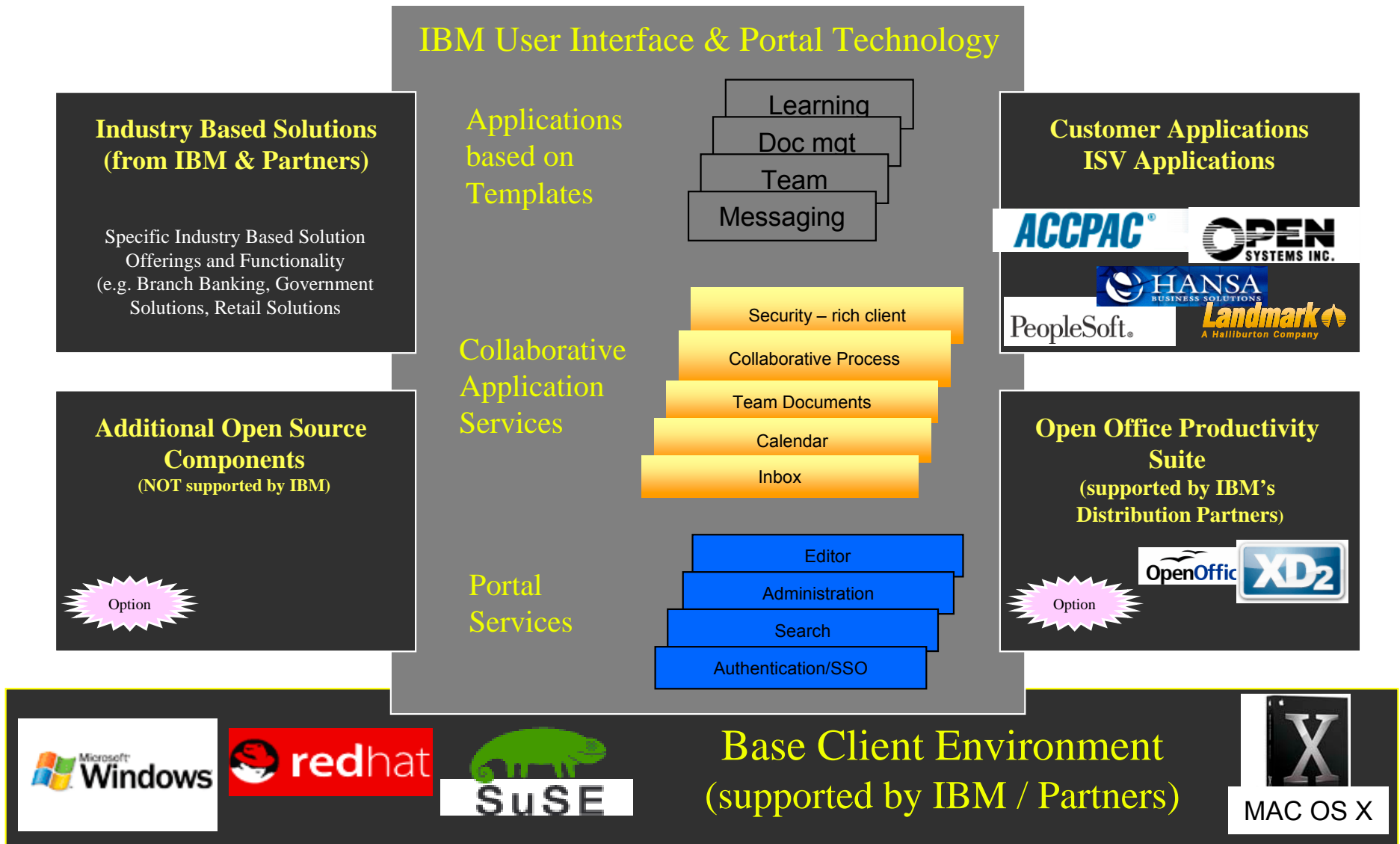
- **Linux and Windows “fat” clients have the same TCO characteristics**
- Operations and support costs dwarf software costs
- “Locked down” and “managed” clients offer better TCO

	Win95 MS Office	WinXP MS Office	WinXP StarOffice	Linux StarOffice	Locked- Down	Typically- Managed	Well- Managed
HW & SW	\$1,423	\$1,423	\$1,348	\$1,311			
Support	\$1,050	\$1,014	\$1,016	\$1,015	\$929	\$921	\$724
Indirect	\$3,577	\$2,848	\$3,038	\$3,121	\$2,296	\$2,550	\$1,375
Total	\$6,050	\$5,285	\$5,403	\$5,447	~\$850 less	~\$900 less	~\$1,375 less

*Annual costs, 3-year life, 2,500 user environment according to Gartner, Inc. 2003

- “Managed” applications offer opportunities to improve TCO

OPEN CLIENT ARCHITECTURE



IGS - Open Client Assessment



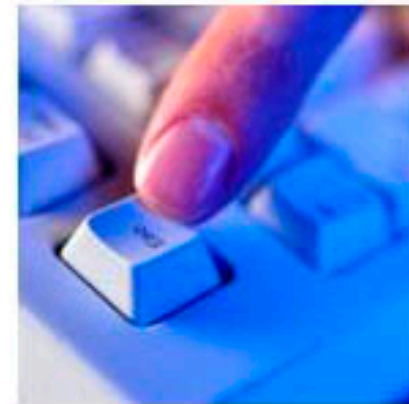
Strategy

How much will I save and where do I start?



Design

How can we get the most value from a pilot?



Pilot

How can we deploy across the organization with confidence?

Incremental phased approach to assessments to help you build a business case, minimize risk

What about IBM PCs and Linux

- Linux on the desktop is getting a lot of press based on announcements by PC vendors
- None of the major PC vendors are preloading Linux on Laptops today !
- IBM PC current position on Linux:
Testing ~80% of machines on Linux
- All ThinkCentre & ThinkPads except the ThinkPad X models will be certified by year end 2004
- In India and China shipping PC-DOS machines with Linux CD-in-a-box
- Working with the PCD team you can help special bid your customers Linux order



Getting to *IBM PCs Certified on Linux*

GO TO:

www.ibm.com/linux

Select:

Solutions for Linux

- Linux solutions
- Service offerings

Hardware for Linux

- Linux on server
- Linux on TotalStorage
- Linux on personal systems
- Linux on workstations

Software for Linux

- IBM Software for Linux
- Partner software

IBM Personal computing support - Linux for IBM Personal Systems...

File Edit View Go Bookmarks Tools Window Help

On Demand Work... IBM BluePages | ... Hotel Monaco - M... IBM Personal co...

Warranty
Automated solutions
Troubleshooting
Submit a request
Support phone list
Site feedback
Site help
Search PC support

↓ Applicable countries and regions

Overview
IBM is committed to providing our customers with information to assist you in utilizing the Linux operating system on various IBM PCD systems.

IBM Products Certified for use with Linux
EWS = Enterprise Workstation

IBM System	Linux Distribution		
	Red Hat	SuSe	Turbolinux
ThinkPad A30	7.1, 7.2	7.2	6.1
ThinkPad A31p	7.2, 7.3	8.0	
ThinkPad R40		8.2, 9.0	
ThinkPad R40e		9.0	10
ThinkPad R50	9.0, EWS 3	Desktop 1.0	
ThinkPad R50p	9.0, EWS 3	Desktop 1.0	
ThinkPad T30	7.3, 8.0	8.0, 8.1	
ThinkPad T40	EWS 2.1	Desktop 1.0	
ThinkPad T40p	EWS 2.1	Desktop 1.0	
ThinkPad T41p	9.0, EWS 3	Desktop 1.0	
NetVista M42	8.0	8.1	
ThinkCentre A30			8
ThinkCentre A50p		8.2	10
ThinkCentre M50	9.0, EWS 2.1, EWS 3	Desktop 1.0	
ThinkCentre S50		8.2	

Miscellaneous Linux certifications
[Newer IBM products](#)

IntelliStation Product Line



IntelliStation A Pro



6224



The Balance of Power
64-bit performance, 32-bit convenience

IntelliStation M Pro



6230



6220

Ultimate graphics performance-6230
Streamlined workstation performance-6220

IntelliStation Z Pro



6221



Scalable multiprocessor performance
for compute-intensive applications

IntelliStation T221 Precision Monitor



9503-DG5



Exceptional clarity and detail
for high-end immersive visualization

2004 – Linux Client Industry Focus

Retail

Branch Banking

Public Sector

EDA (Electronic Design Automation)



Linux Solutions for all Three Tiers of Retailing



- Legacy application servers
- Data warehouse/ data marts
- Web application servers

Enterprise
Tier 3

- Internet
- VPNs
- Leased lines

In-store Servers
Tier 2

- POS controllers
- Legacy ISP / Store servers
- Web application servers

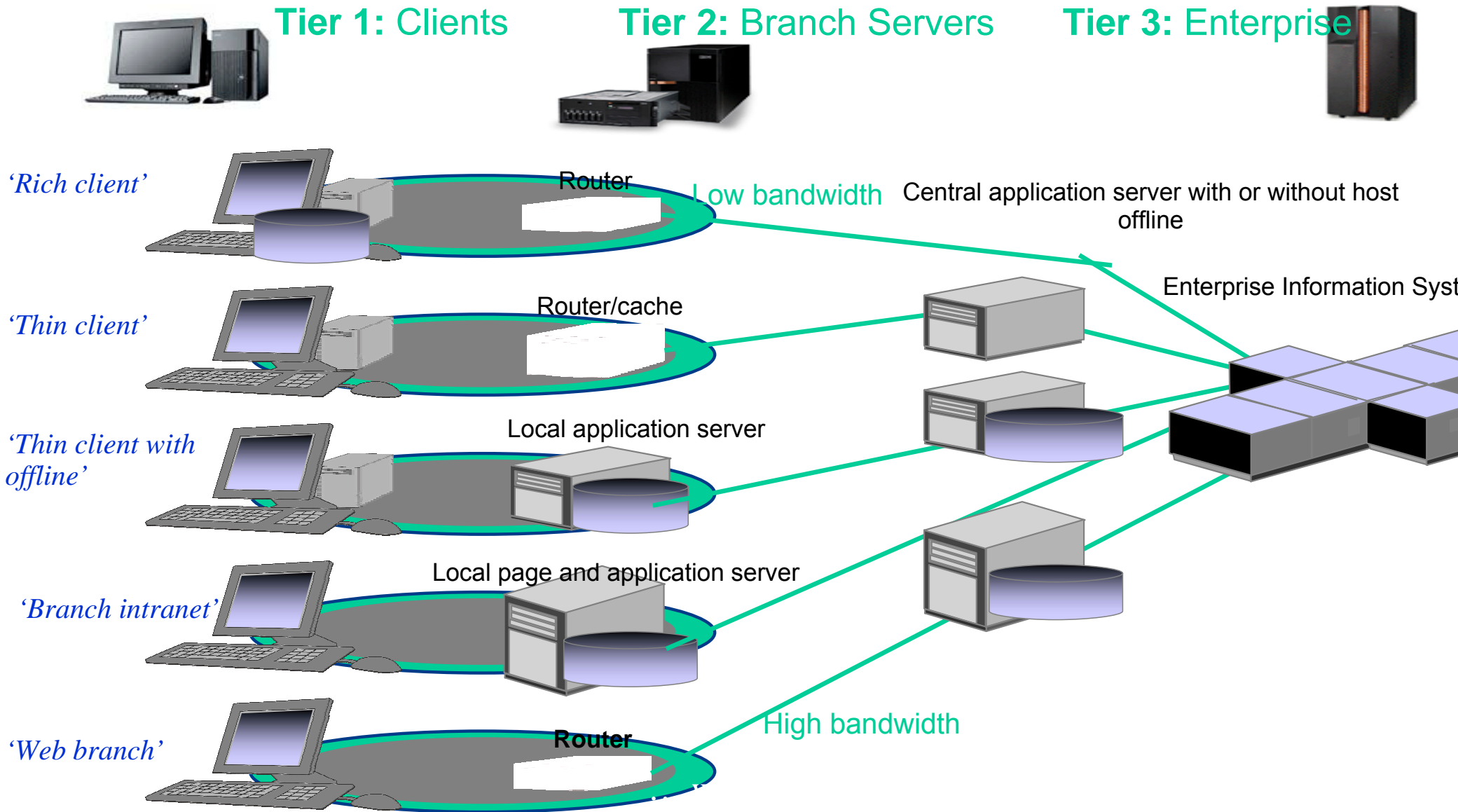


User touchpoints
Tier 1

- POS terminals
- Kiosks
- End User Device
- Mobile devices

IBM
Retail
Environment
For
SuSE

Linux is a key component of IBM's Branch Banking Technology Portfolio



Public Sector Embracing Linux on the Client

National and Local Adoption Momentum Accelerating

- Governments will spend over \$2B on Linux related HW, SW and Services in 2004
 - *We see significant demand for Open Office support*
 - *Looking to replace MS Office*
 - *Seeking advice from IBM on the Linux Client*
 - *Discuss with these customers where they can succeed first with Linux on the desktop*



Linux is moving rapidly to the engineering workstation



- **Higher performance**
- **Lower TCO**
- **Reliability and Stability**
- **Mobility, improved productivity**
- **More flexibility, no vendor lock-in**
- **Interoperability**

EDA environment & ISVs

- “Typical” EDA applications and already on Linux

Cadence, Synopsys/Avanti, Mentor Graphics

- ✓ Strong IntelliStation offerings
 - Red Hat Linux preloaded
- ✓ Customer references available
- ✓ IBM, Intel Announce Mobile Workstation for Design Engineers
 - *Uses Cadence Design’s software and Linux*
 - *IBM Thinkpads*



LVM Insurance

German Insurance Service Supplier

Challenge

- Enable sales force mobility and provide accurate, up to date data at customer locations

Solution

- Sophisticated thin client architecture capable of providing services to geographically dispersed sales force

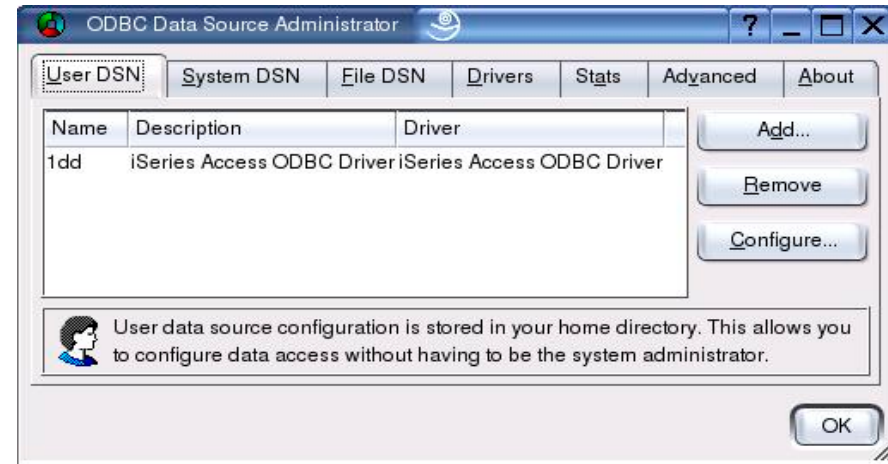
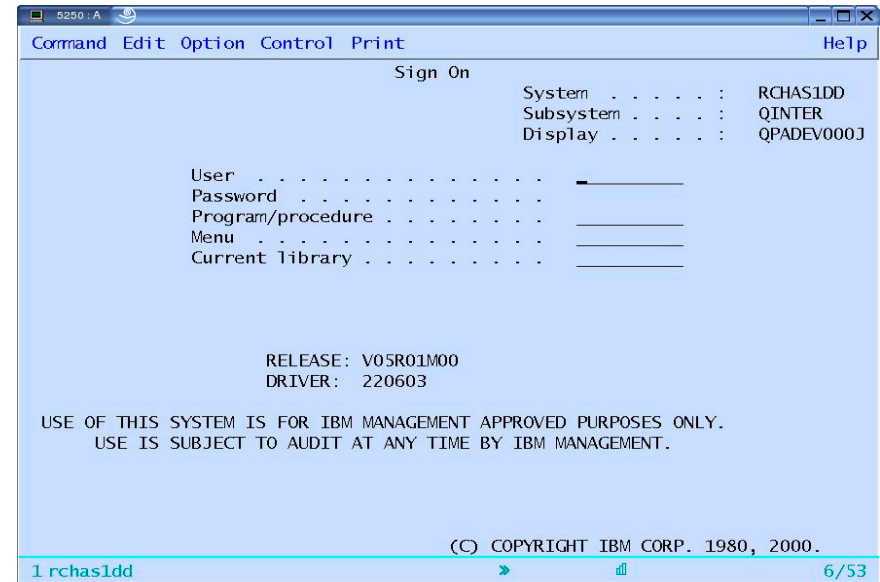
Benefit

- Sales force can handle proposals and requests, process damages or change any contract related data from the customer's living room



iSeries Access for Linux

- **A full-function 5250 emulator**
That runs natively on a desktop Linux operating system
- **An ODBC Driver**
This functions enables your Linux PC applications to access information in DB2 UDB for iSeries database
Runs either on Linux desktop or in Linux partition (LPAR – Power PC) on iSeries
- **iSeries Access API's**
RmtCmd, NLS, System Object, ...
- **Available since August 2003**
5014 Downloads in 2004
1100 Downloads in 2003
- **Designed to run on Linux**
 - Red Hat Linux
 - SUSE Linux



www.ibm.com/eserver/series/access/linux

IBM Provides - Mozilla Technical Support !

- 1) IGS Led Support Offering
 - Support tied to Linux support , Mozilla included in the Linux support
 - L1, L2 - How-to Questions
 - L3 (code fixes)
 - Referred to Linux vendor

- 2) Mozilla Technology Center Offering via IGS
 - IGS Contract with Mozilla technology Center
 - Mozilla only support (special bid)
 - L3 on specific Mozilla versions (1.4.x, 1.7.x)
 - All fixes from IBM rolled into Mozilla and available from mozilla.org

Client OS	Windows	MAC OS X	Sun JDS	Novell/SUSE	Red Hat
User Desktop	Windows XP GUI	Desktop	Gnome 2.2	Gnome 2.2 / KDE 3.1.1	Gnome 2.2 / KDE 3.1.1
JRE	MS/SUN JVM	JVM	Sun J2SE /JVM	JVM	JVM
Base Apps	Text Editor, Calculator, CD Player, Media Player, Image Viewer, as well as many system configuration tools.	Text Editor, Calculator, CD Player, Media Player, Image Viewer, as well as many system configuration tools.	Text Editor, Calculator, CD Player, Media Player, Image Viewer, as well as many system configuration tools.	Text Editor, Calculator, CD Player, Media Player, Image Viewer, as well as many system configuration tools.	Text Editor, Calculator, CD Player, Media Player, Image Viewer, as well as many system configuration tools.
Browser	Mozilla / Internet Explorer	Mozilla /Safari	Mozilla	Mozilla	Mozilla
Office Suite	Microsoft Office	Mac Office 2004	Star Office 7	Open Office 1.1 -Basis for Star Office Suite 7	Open Office 1.1 Basis for Star Office Suite 7
Mail & Calendar	Lotus Notes & Domino Outlook & MS Exchange	Mac Mail and iCal	Evolution 1.4	Evolution 1.4 , KMail, Mozilla Mail, Domino Web Access	Evolution 1.4 , KMail, Mozilla Mail, Domino Web Access
10K+ Industry Applications	20K + ISV Apps Worldwide				



Client OS	Windows	MAC OS X	Sun JDS	Novell/SUSE	Red Hat
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User Desktop	Windows XP GUI	Desktop	Gnome 2.2	Gnome 2.2 / KDE 3.1.1	Gnome 2.2 / KDE 3.1.1
JRE	MS/SUN JVM	JVM	Sun J2SE /JVM	JVM	JVM
Base Apps	Text Editor, Calculator, CD Player, Media Player, Image Viewer, as well as many system configuration tools.	Text Editor, Calculator, CD Player, Media Player, Image Viewer, as well as many system configuration tools.	Text Editor, Calculator, CD Player, Media Player, Image Viewer, as well as many system configuration tools.	Text Editor, Calculator, CD Player, Media Player, Image Viewer, as well as many system configuration tools.	Text Editor, Calculator, CD Player, Media Player, Image Viewer, as well as many system configuration tools.
Browser	Mozilla / Internet Explorer	Mozilla/Safari	Mozilla	Mozilla	Mozilla
Office Suite	Microsoft Office	Mac Office 2004	Star Office 7	Open Office 1.1 -Basis for Star Office Suite 7	Open Office 1.1 Basis for Star Office Suite 7
Mail & Calendar	Lotus Notes & Domino Outlook & MS Exchange	Mac Mail and iCal	Evolution 1.4	Evolution 1.4 , KMail, Mozilla Mail, Domino Web Access	Evolution 1.4 , KMail, Mozilla Mail, Domino Web Access
10K+ Industry Applications	20K + ISV Apps Worldwide				
Server Managed Client	<u>IBM Workplace</u> - Secure Replicated File System - App Execution Security	<u>IBM Workplace</u> - Secure Replicated File System - App Execution Security		<u>IBM Workplace</u> - Secure Replicated File System - App Execution Security	<u>IBM Workplace</u> - Secure Replicated File System - App Execution Security



Timothy Kounadis
IBM Workplace Team
Lotus Software



Scope of IBM Workplace

All of the products and technologies that make people more productive

■ Defining the Broad Continuum of Client Interactions

Evolution of the computing paradigm

Server managed client model

Support for standards

Interoperable with existing elements of the infrastructure

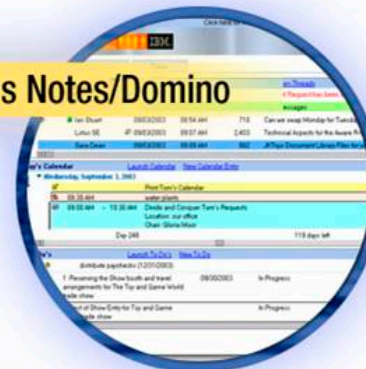
Lotus Workplace



WebSphere Everyplace



Lotus Notes/Domino

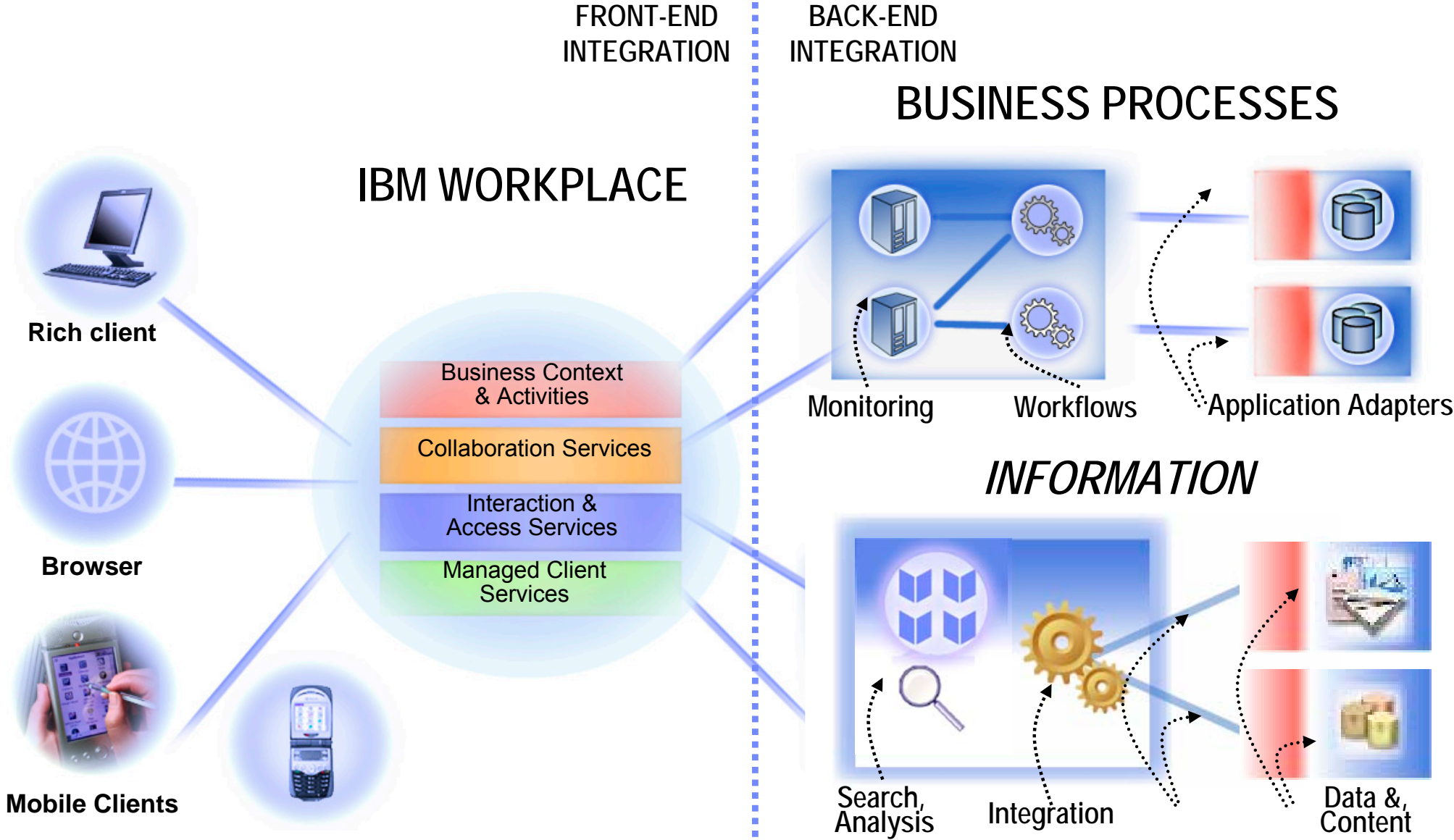


WebSphere Portal



Managed Client Model

Making More People More Productive in the Context of The Business They Do Every Day



The power of one architectural model, one programming model, one consistent tool set

IBM Workplace Family Announcement

- *New* IBM Workplace Client Technology, Micro Edition
- *New* IBM Workplace Client Technology, Rich Edition
- Release 2.0 of Lotus Workplace Products

Evolved from integrated products to platform in 8 months

Products Featuring Managed Client

IBM Lotus Workplace Messaging

IBM Lotus Workplace Documents

IBM Lotus Workplace Team Collaboration

IBM Lotus Workplace Web Content Management

IBM Lotus Workplace Collaborative Learning

- IBM Lotus Workplace for Business Controls and Reporting 2.0

IBM Workplace Client Technology, Micro Edition

*An embedded middleware framework which enables application and services deployment, device configuration and life-cycle management, to a wide spectrum of mobile and pervasive devices via **server managed clients***

Standards based
service delivery
and management
platform

IBM Workplace Client Technology, Micro Edition

Industrial Controller



Telematics Controller



Smartcard



Cell Phones/PDAs



Banking ATMs



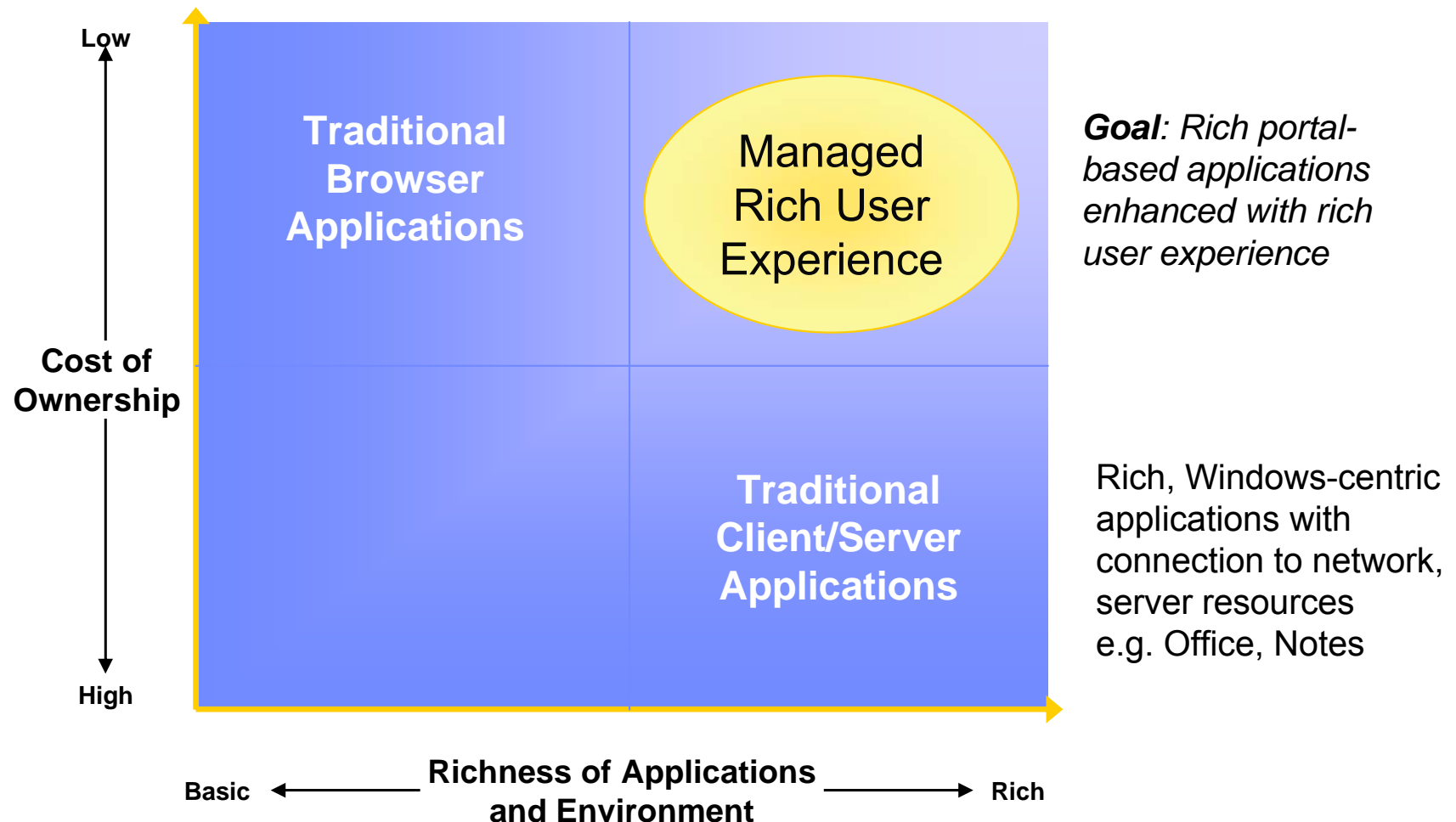
Laptop



Micro Environment value

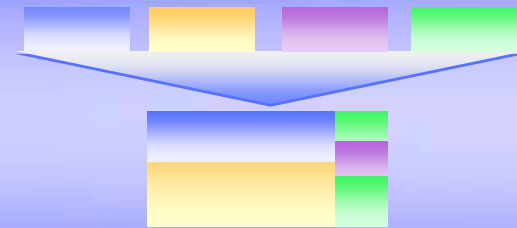
- Increasing mobile worker productivity
- Decrease network connection costs
- Decrease development and deployment costs
- Adaptable to a variety of popular device types

Challenge – To Achieve Rich Client Functionality at low TCO

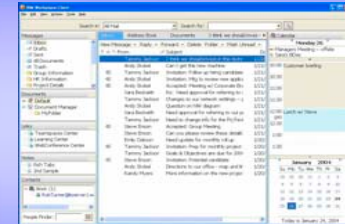


IBM Workplace Client Technology

A dynamically provisioned client middleware built on standards with choice of operating systems



An innovative component based assembly model for building dynamic workplaces delivered on demand



An improved security model delivered via secure, encrypted and replicated repository not accessible by rogue programs



A foundation for a new model of rich client computing for the industry...

- Lotus Workplace Messaging
- Lotus Workplace Documents
- Other IBM & Partner Applications

IBM Workplace Client Technology

No Touch Deployment – Helps Lower TCO



- Server-managed delivery of rich clients to end user communities
- Centralized administration, setup and client updates
- Provision capabilities when needed – *on demand*

Rich user experience



- Disconnected use and synchronization
- Power of client software – i.e drag-n-drop, improved responsiveness, UI control
- Componentized and Contextual
- Embedded Doc Management

Extensible client platform for

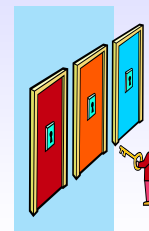
- Collaboration, including mail, calendaring and scheduling, instant messaging, team spaces...
- Document management
- Existing Web, Java, .Net and Notes Applications
- New Applications – IBM and Business Partners

Built in Data Management and Security Features



- Using local and server managed encrypted data stores
- With robust policy managed access and control

Choice and Flexibility



- Linux, Windows and MacOS (planned) desktops
- Manage office documents and Java, .Net and C++ applications
- Standards-based interoperability

IBM Lotus Workplace Documents

with *IBM Workplace Client Technology*

Centralized location for end users to create, import, edit and save rich documents, presentations and spreadsheets within an integrated rich client environment.

- **Low TCO business-oriented document library services**

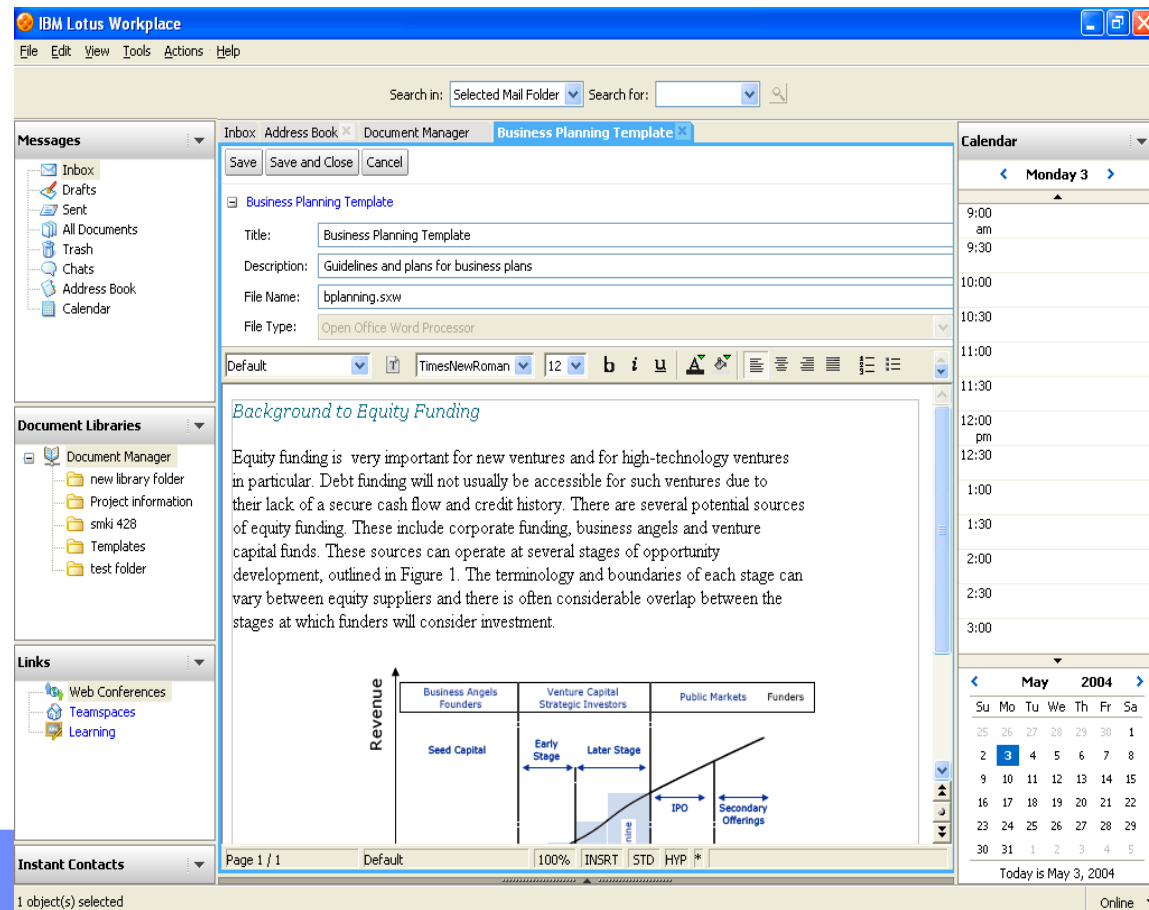
- Central control, management and provisioning of end users environments
- Synchronization between the local and server stores
- Integration with Enterprise Document Management

- **Security extended to locally managed data store for all documents created within the application**

- **Increased Productivity / Reduced Desktop Complexity**

- A full desktop productivity user experience with built in editors for documents, spreadsheets, presentations
- Support for disconnected use

- **Multi-client Platform support**



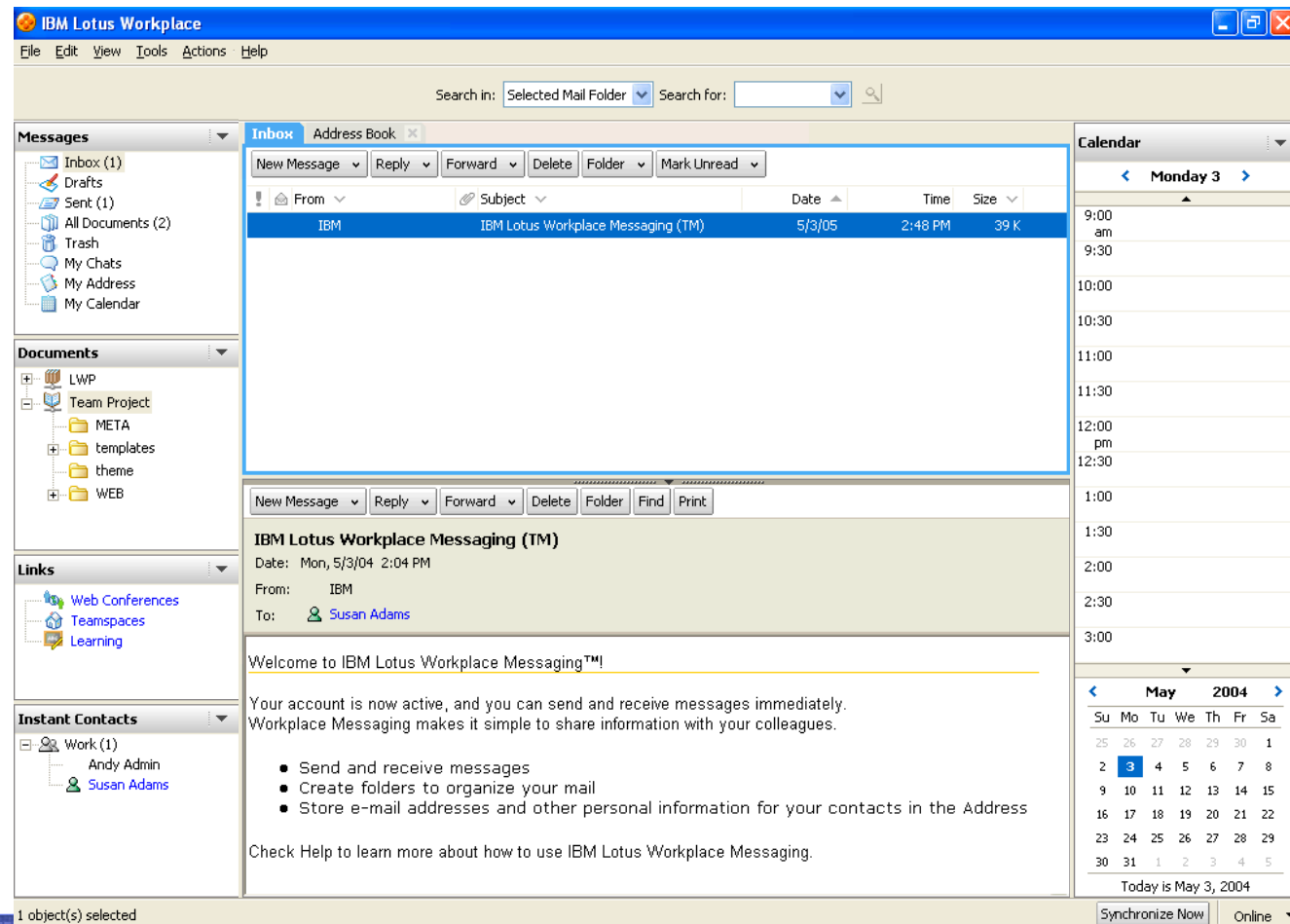
IBM Lotus Workplace Messaging

with *IBM Workplace Client Technology*

In 2.0, we will introduce a rich client edition to complement the existing web access/browser edition of Lotus Workplace Messaging

- Mail (based on same Lotus Workplace Messaging Mail for browsers)
- Group C&S (based on Lotus Workplace Messaging – basic meeting negotiation)
- Dynamic client provisioning, configuration, upgrade
- Secure local data store
- Offline support
- Multi client platform support

- Other:
 - Integrated Instant Messaging and chat, including ability to save chats
 - Full text search on local mail
 - People Finder
 - Universal Navigator
 - Attention indicators
 - Spell Check
 - And more ...



WebSphere Portal Server

Portal Is the Desktop

- Combines application user interfaces together into one unified presentation
- Users in different roles see different pages and content
- Administrators can either lock or open up areas of the page for end users to customize
- Administration tasks can be delegated to anyone
- Mozilla Support

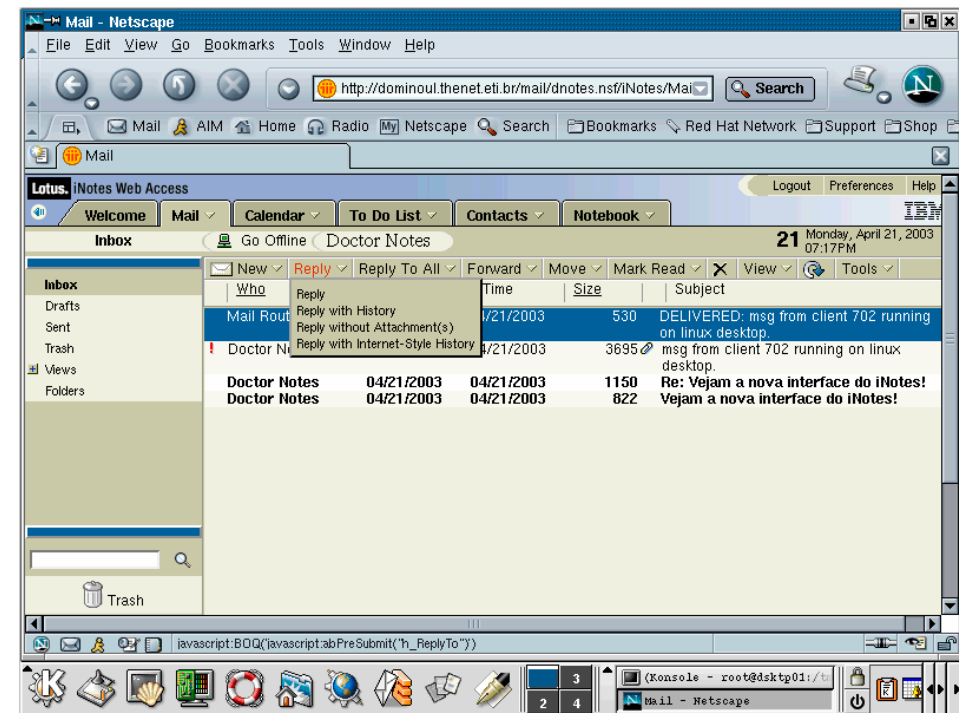


IBM Lotus Domino Web Access 6.5

- Mozilla support for *World-Class* Domino Web Access
Including Mail, Calendar and Scheduling, Instant Messaging integration, Replication
- Complete Linux Solution
End-to-End – Client-to-Server
Drive Down Costs



**Best of Show
January 2004**



1.3.1 Mozilla client

Linux RedHat 7.2, 8.0, 9.0

Packaging/Pricing Summary

	Products	Price	Introduced in 1.0/1.1	Introduced with 2.0	Workplace Client tech available 2.0
Buy individually or in any combination for flexibility	Lotus Workplace Messaging	\$29/user			New!
	Lotus Workplace Collaborative Learning	\$35/user			
	Lotus Workplace Team Collaboration	\$89/user			IM only New!
	Lotus Workplace Web Content Management	\$49,999/CPU			
	Lotus Workplace Documents	29/user		New!	New!
Buy all at once for simplicity	Primary bundles that have Lotus Workplace products				
	IBM Software Solution for On Demand Workplace	\$399/user	Announced in January 2004	Add Lotus Workplace Documents	New!
	Lotus Workplace portfolio bundle** (all Workplace products w/o portal)	TBA		New!	New!

Adding on the IBM Workplace Client technology to Lotus Workplace products

	Products	Price	Introduced in 1.0/1.1	Introduced with 2.0	Workplace Client tech available 2.0
Buy individually or in any combination for flexibility	Lotus Workplace Messaging	\$29/user			
	Lotus Workplace Collaborative Learning	\$35/user			
	Lotus Workplace Team Collaboration	\$89/user			
	Lotus Workplace Web Content Management	\$49,999/CPU			
	Lotus Workplace Documents	29/user			
Buy all at once for simplicity	Primary bundles that have Lotus Workplace products				
	IBM Software Solution for On Demand Workplace	\$399/user	Announced in January 2004	Add Lotus Workplace Documents	
	Lotus Workplace portfolio bundle** (all Workplace products w/o portal)	TBA			

+

**New!
Info**

An **UNPUBLISHED** SKU will be available to add rich client experience
To find out SKU #, You must first get approval through Client Project Office

For use with any IBM or Partner product where technology is available.
 Fee charged once per user.

Technology Name	Price	Introduced in 1.0/1.1	Introduced with 2.0
IBM Workplace Client technology	\$2/user/month Each year NO discounting		

Key Deliverables Expected within next Twelve Months

2Q04	3Q04	4Q04	1Q05	2Q05
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Lotus Workplace Products 2.0

- Rich Client (including disconnected)
- Collaborative Documents
- Workplace Builder
- Enhance 1.1 products

IBM Lotus Notes/Domino 6.5.1 products

- Synchronize Domino family products
- Domino Based
- Lotus Instant Messaging & Web Conferencing
- Lotus Team Workplace
- Domino Document Manager

Lotus Workplace Products 2.5

- iSeries, Solaris Server Support
- Expanded Data Store Support
- Continued API build-out
- Enhanced Tooling
- Rich Clients for Portlets
- ISV Tools for Rich Client Applications
- Mobile Rich Client
- Tech preview for Notes/Domino plug-in for Linux

IBM Lotus Notes/Domino 7.0 products

- Tighter integration between Domino family applications
- Tighter integration with Workplace
- Continued focus on TCO
- Administration, performance and scalability improvements.
- Enhanced Application Development with DB2 storage and native web services
- Workplace for Notes Application

WebSphere Portal Enable & Extend 5.02

WebSphere Portal Express & Express Plus 5.02

WebSphere Portal V5.0x

WebSphere Portal 5.1

WebSphere Portal Enable & Extend for z/OS V5.1

Linux Client Summary

- Remember : The IBM client strategy is customer driven
- We are focused on the Linux client usage segments where we know Linux on the client can succeed in 2004
- Retail, Finance, Public Sector, and EDA
- We will lead with an IGS offering and will drive sales of the PCD Think Family and xSeries IntelliStation to capture this emerging market opportunity
- IBM Workplace is now a critical part of our client strategy
- Linux Client Sales Kit
<http://w3.linux.ibm.com/linux/sales/desktop.shtml>

The Need for Linux on the client is Everywhere

w3.linux.ibm.com



HR



Finance & Administration



Health benefits



Store Manager Operations



Customer Service



Procurement



Event Management



HCM



Social Services



Wealth Management

Linux Client Project Office

- Mission

The Worldwide Linux Client Project Office will provide support to sales teams and act as the facilitator for opportunities in order to rapidly grow our Linux Client sales.

- What does that mean?

Lend assistance to field sales force on major opportunities (account calls, briefings, technical requirements, coordination across IBM divisions, etc)

Help overcome challenges

Build skills and transfer knowledge

Assist marketing team in crafting value propositions, messages, and Sales deliverables

Communication to Linux management team on opportunities, issues and requirements

Linux Client Project Office

- **Who we are:**

Brian Fullington - Worldwide Project Office Sales focal point

Billy Boykin – Worldwide Linux Client Sales Leader

Greg Kelleher – Project Office Lead and Strategy

Sigmund Puchacz – ISV & Sales support

Christopher Creber – EMEA Sales focal point

Shintaroh Nezuka – AP Sales focal point

- **Contact the project Office :**

LinuxClientProjectOffice/Raleigh/IBM@IBMUS

lcpo@us.ibm.com

Call to Action

- Sell what we have today
 - IGS – Open Client Assessment
 - Retail, Banking, Public Sector and EDA to the right set of users
 - PCs and IntelliStations
 - Lotus Workplace Documents and Lotus Workplace Messaging with Linux client desktops
 - Lotus Workplace product family accessed with Mozilla
 - WebSphere Portal Server with Mozilla
 - Domino Web Access with Mozilla
- Engage the Linux Client Project Office !

Notes Mail Address **LinuxClientProjectOffice/Raleigh/IBM@IBMUS**

Internet Mail Address **lcpo@us.ibm.com**