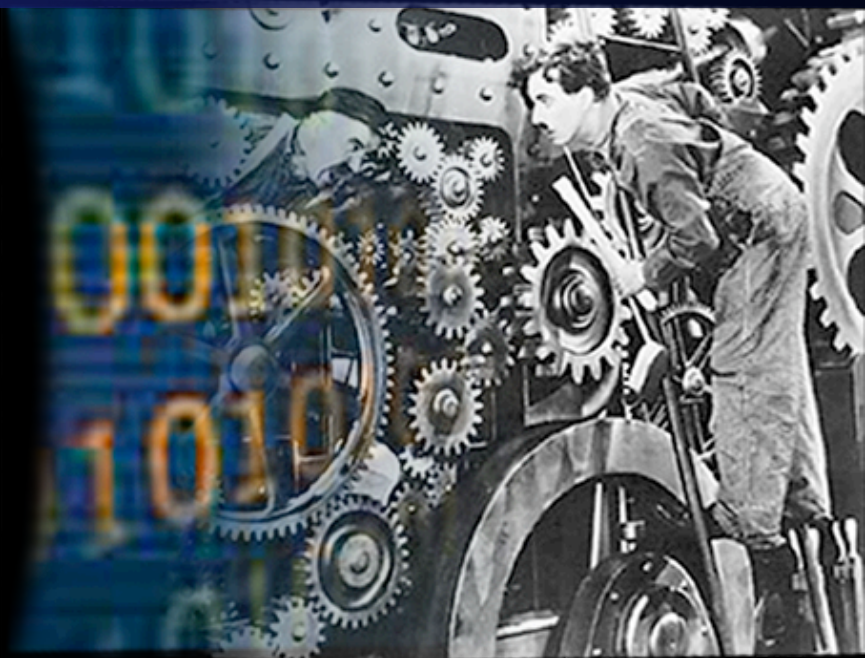


Mash-ups & Beyond

The Role of Remixability



Rod Smith

 **JAOD**
conference
- for Developers by Developers

Business Insights: what are customers telling us

*Millions of markets of dozens of people... ..
where's the business value?*

Targeting niche markets - Internet technologies continue enabling businesses to expand their ecosystems & partnerships

A cornerstone for Web 2.0 is enabling data & services to work in ways beyond their original intent

Unlocking valuable business data opens new business opportunities

Instant business value - mashing up the right content both from intranet & internet sources to gain business advantage

Key Business Drivers

- LOB teams are just IT savvy enough to create their own services/solutions that drive their part of the business
(Igniting the Phoenix: A New Vision for IT/Sapir)
- Cost of customization down by orders of magnitude enabling acting on emergent business opportunities quickly.
- Business world beginning to “standardizing” on web 2.0 content portability through syndication feeds & widgets

The long tail: whole bunch of business opportunities that have been unaffordable to reach

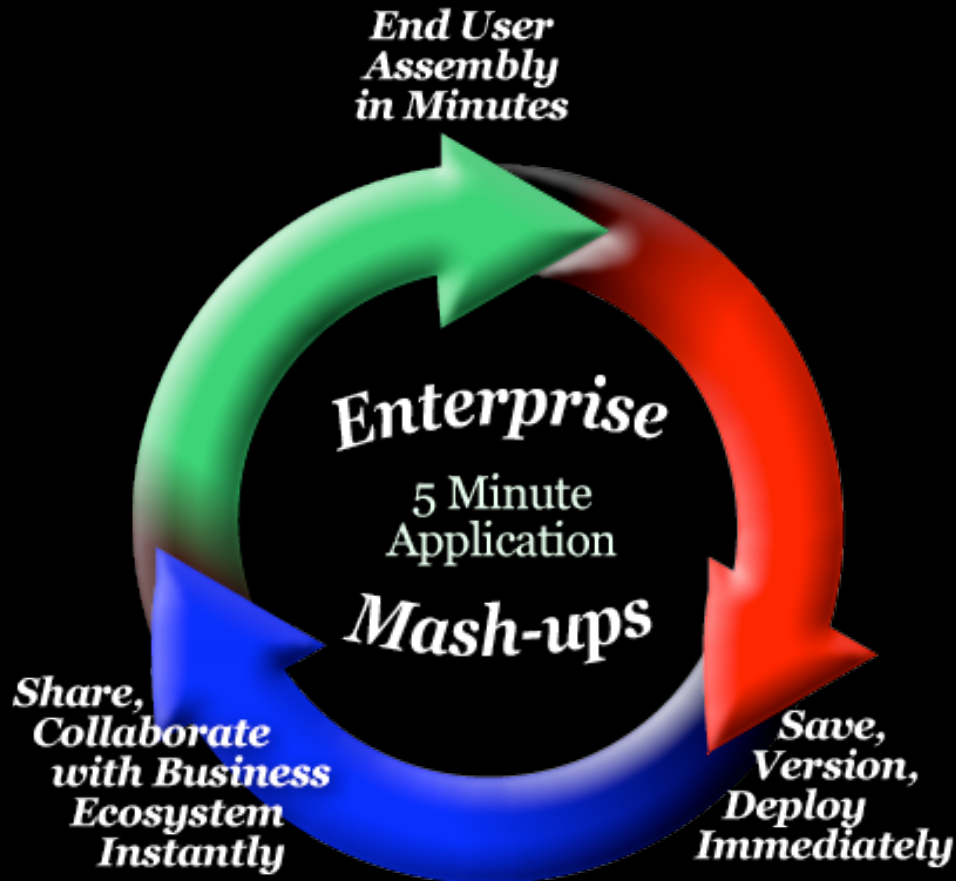
Business Insights: mash-ups concept not that new - but has evolved

The evolving line-of-business & IT relationship....

- Shadow IT: *do-it-yourself IT* has always been around
- The content: balancing control & *collaboration*
- Instant value: *immediate* business impact
- Wow factor: *now* , can you *mix in* this and this and ...



Reshaping of Enterprise: emerging “self service” business pattern



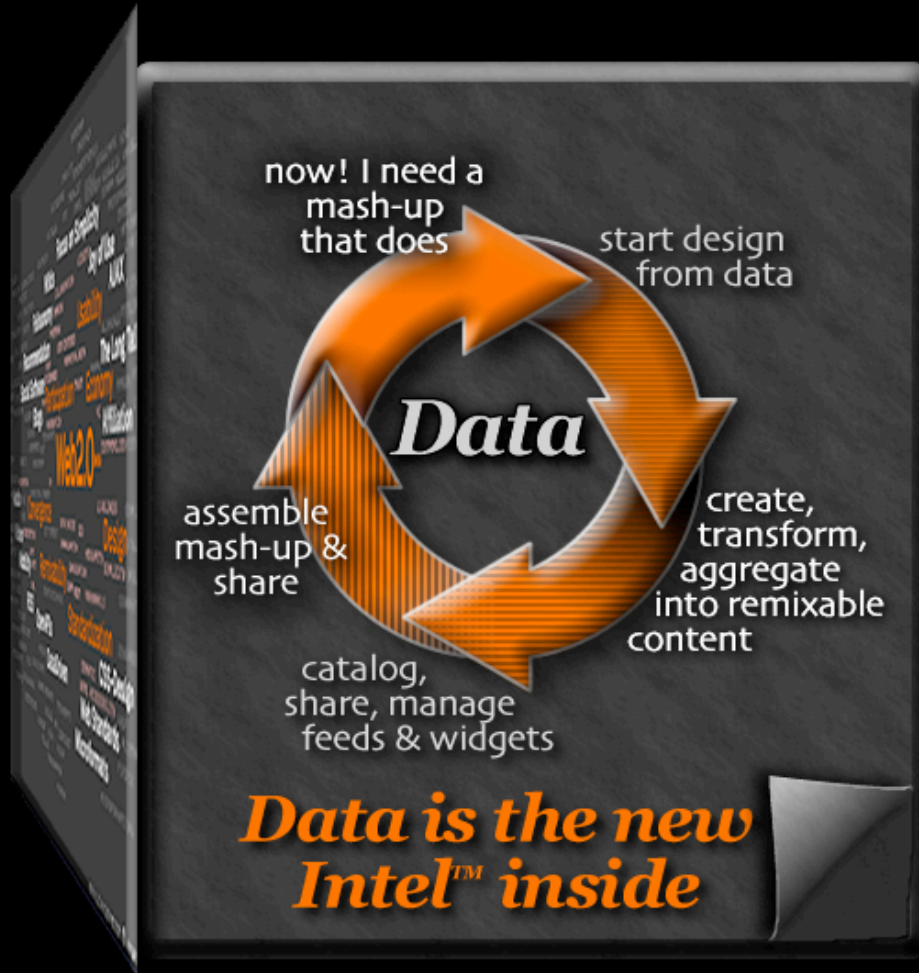
Web 2.0 Content Ecosystem

- enterprise *mash-ups* - enabling “web apps” creation by LOBs & subject matter experts
- ease of access to the data that can be combined in different ways to meet ad hoc business opportunities
- designing for *re-mixability*
 - combine data for diverse information services
 - transforming into portable, re-mixable assets & services
 - discover-ability of content both internet & intranet
- exploiting *emergent* business opportunities

Reshaping of Enterprise: emerging “self service” business pattern

Web 2.0 Content Ecosystem

- enterprise *mash-ups* - enabling “web apps” creation by LOBs & subject matter experts
- ease of access to the data that can be combined in different ways to meet ad hoc business opportunities
- designing for *re-mixability*
 - combine data for diverse information services
 - transforming into portable, re-mixable assets & services
 - discover-ability of content both internet & intranet
- exploiting *emergent* business opportunities



Remixability - Why Is this Important?

Data is the new Intel inside & the ability to easily remix content is here to stay... owning a unique, hard-to-replicate data source as a competitive advantage

- Amazon has valuable content their ecosystem can remix in ways to create new on-line retail opportunities
- eBay has valuable content for their community
- Google has content can remix in ways to create new business opportunities

Businesses own huge amounts of a unique, hard-to-replicate data sources - enabling them to unlock at the cost point - is key

Enterprise Mash-up Ecosystems: opening business content with middleware & information services to be re-mixable for emergent business opportunities

Break the mold - show me the flexibility to remix my content & (web) services in ways beyond their initial design

Dun & Bradstreet - Web 2.0: The Future of Information



Web 1.0

Centralized Web Portal

Data Integration

Application Centric

How do I get data into my application?

Invention

Build it, they will come

Interoperate

Point to point XML integration

Technology Owned

Web 2.0

Web Services

Mash-ups

Data Driven

I have all this data, how can I unlock it?

Innovation

Distributed, discoverable, easy to use

Collaborate

Real Time B2B Multi-Channel Composite Applications

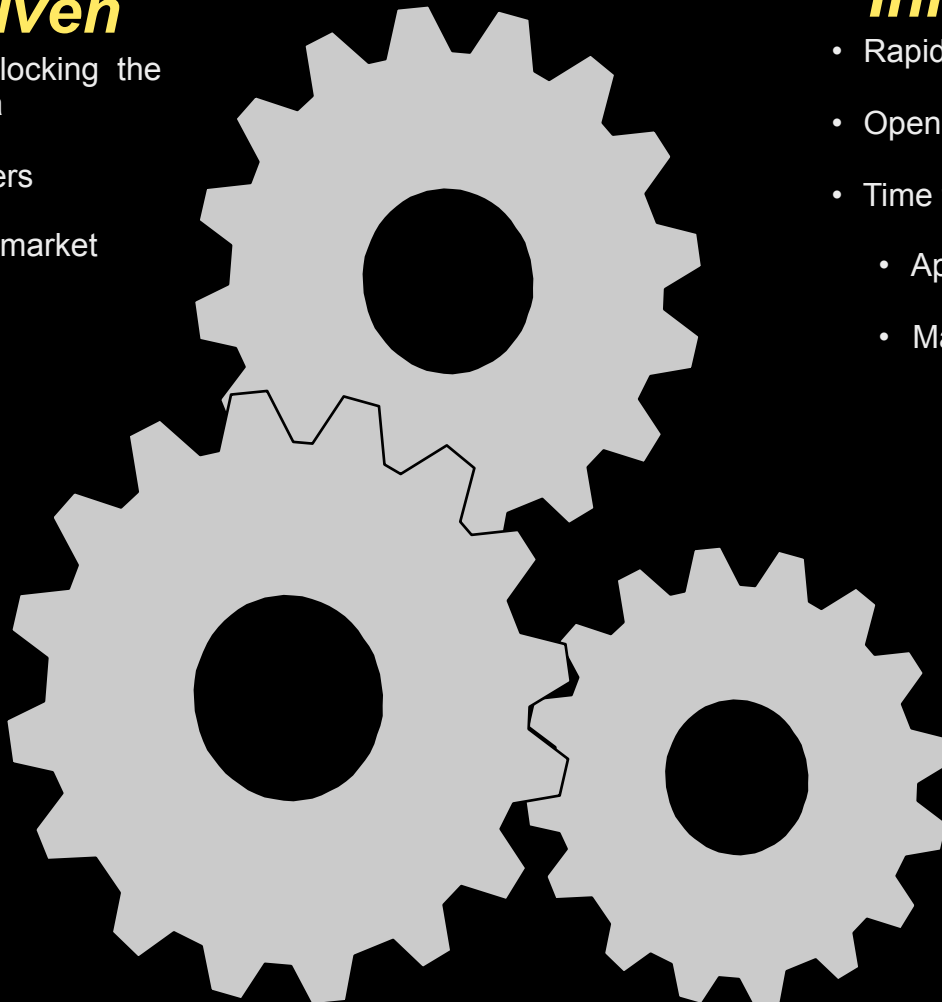
User Owned

Dun & Bradstreet - Web 2.0: The Future of Information



Data Driven

- Customers are unlocking the value of D&B data
- 90% new customers
- 70% small to mid-market customers



Innovation

- Rapid new product deployment
- Open up new channels
- Time to market reduced by 30-50 %
 - Application development cost reduced 30%
 - Maintenance costs reduced by 40%

Collaboration

- User tools to rapidly adapt to business changes
- Reuse and re-mixability reduced Integration time from 20-30% to 10-15% of total project time



Dun & Bradstreet - Enterprise Mash-up

Data Driven

- Unlocking the business value of D&B content
- Remixing data sources, & web services to meet business opportunity

The screenshot shows a web application interface with a table of company data, a Google Map, and a news feed.

DUNS	Company Name	Tel	Billing State
072148931	eForce	(415) 901-7000	CA
060704700	Apple	(408) 996-1010	CA
001368083	IBM	(919) 486-1549	NY
000268119	Boeing	(312) 544-2000	IL
074801380	Elucress Blueshield	(428) 752-8007	TN
097220180	Gartner	(733) 387-5750	CT

The Google Map shows a location in Chicago with a callout box containing the following information:

- Company name: The Boeing Company
- Trade style: Boeing
- Street address: 100 N Riverside Plz
- City: Chicago
- State or province: Illinois
- Country: UNITED STATES OF AMERICA
- Zip Or postal code: 60606-2016
- Telephone number: (312) 544-2000
- Country telephone access code: 1

The news feed on the right includes the following items:

- Starting to plan for Boeing's departure** (10 Oct 2006 10:10:00 GMT): O'Register, CA - 16 hours ago. ANAHEIM & Freeway access, nearby railroads, a city-run utility company with below-average rates and a central location make the Boeing Co.'s 103-acre parcel ...
- Boeing announces new base in Madrid, buys three Boeing plants** (10 Oct 2006 15:04:00 GMT): Forbes, NY - 11 hours ago. LONDON (AFP) - Ryanair Holdings PLC, the low-fare airline, announced its 18th European and second Spanish base at Madrid Barajas International Airport. ...
- Boeing awarded \$2.8bn** (10 Oct 2006 09:38:00 GMT): Engineer Online, UK - 17 hours ago. Boeing and Emirates finalised an order for 10 747-8 Freighters during an official ceremony held at Dubai's Department of Civil Aviation yesterday. ...

Innovation

- D&B GeoPoint: Access rooftop geographic information using the customer's DUNS number
- D&B WorldBase Marketing Plus: Retrieve Real-time company information
- Google Maps: Plot customer data on a map

Collaboration

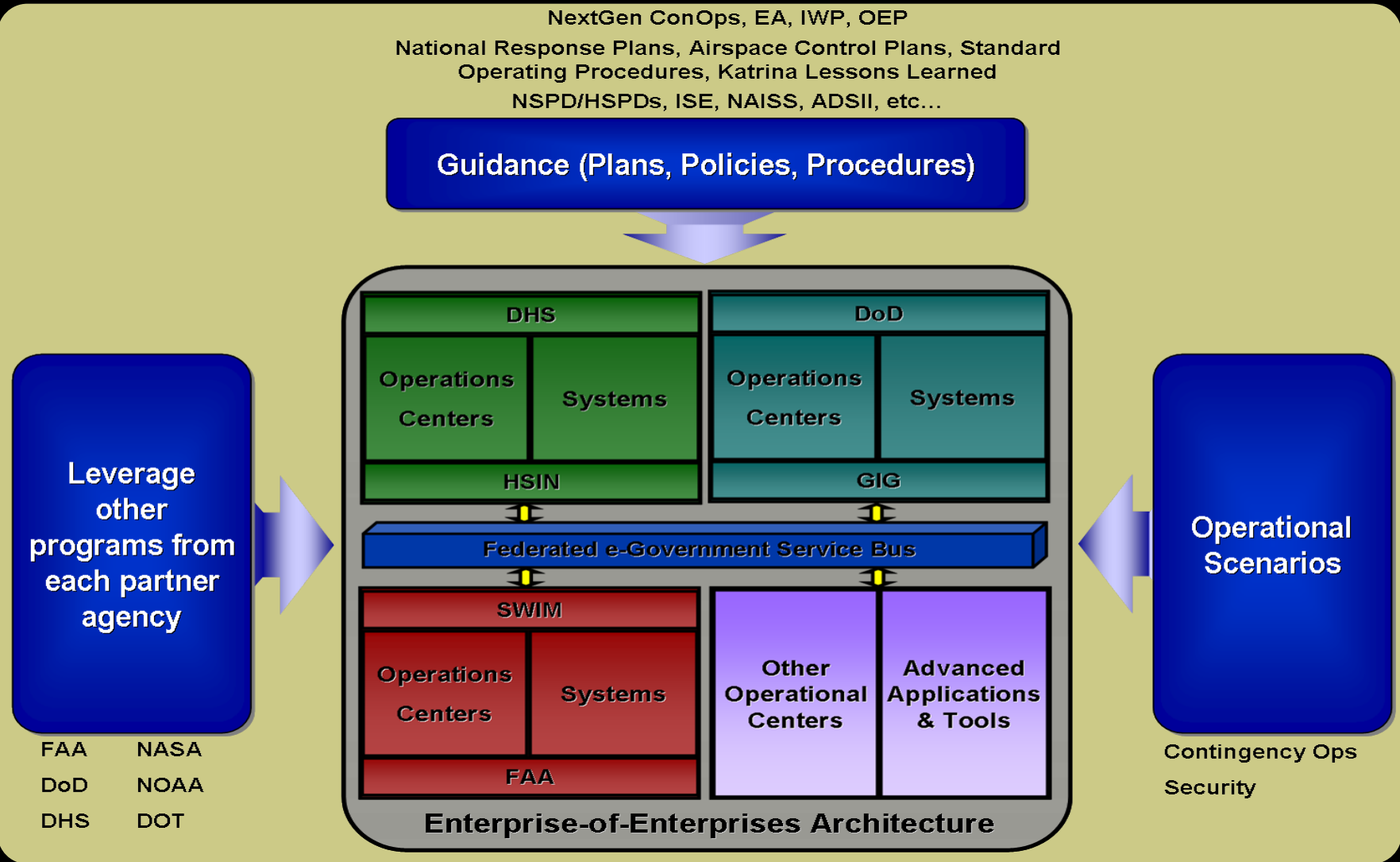
- D&B web services & content
- Strikelron™
- IBM mash-up maker technology
- Salesforce: Online CRM solution containing organization's customer account list

NextGen NEO Demo

- During Hurricane Katrina authorities could not quickly use existing systems to find airports that were opened and had runways with enough capacity to land C130 transport planes carrying relieve supplies.
- During NEO Spiral 1 Scenario development, Boeing saw a need for authorities to use existing data and systems to react to unexpected events and develop new capabilities.
- Within three weeks Boeing and IBM had deployed mashup capability using IBM's Mashup Center. Boeing successfully demonstrated the capability to FAA, DoD, DHS.



Overarching Approach to the Joint NEO Project



NEO Airport Mashup

Operator Queries

Yahoo Map

Airport Location/Status Data
(Colored Icons)

Weather Data
(Overlay)

Airport Detail

Airport Data

Runway Data

Alert/Warning
(NOTAM) Data

Boeing Usable Airports Search

Boeing Search Form

Enter airport search criteria:

City:

State:

Radius (in miles):

Min.Runway Length:

Show all airports

Open Airports

Airport Name	ICAO	Runway
JOHN F KENNEDY INTL	KJFK	1
LA GUARDIA	KLGA	1
MORRISTOWN MUNI	YMMU	

Runway Details

Length	Width	Surface type
7000	150	ASP

Generic Map

Airport Details

Airport Name	Location	ICAO	Latitude	Longitude	Elevation
LA GUARDIA	36	KLGA	40.777245	-73.872608	22

NOTAM Messages

Source_id	Account_id	Area_description	Notam_id	Part	
K	KL	KKL, CLEVELAND, OH, US, (734191N, 834623W) [CLE]	1/938	1/1	Thu
K	KL	KKL, CLEVELAND, OH, US, (912861N, 77975W) [CLE]	3/281	1/1	Thu

NEO Airport Mashup

Go to Edit

Boeing Search Form

Enter airport search criteria:

City:

State:

Radius (in miles):

Min. Runway Length:

Show all airports Search

Generic Map

Open Airports

Airport Name	ICAO	Runway
JOHN F KENNEDY INTL	KJFK	1
LA GUARDIA	KLGA	1
MORRISTOWN MUNIT	KMMU	1

Airport Details

Airport Name	Location	ICAO	Latitude	Longitude	Elevation
LA GUARDIA	36	KLGA	40.777245	-73.872608	22

Runway Details

Length	Width	Surface type
7000	150	ASP

NOTAM Messages

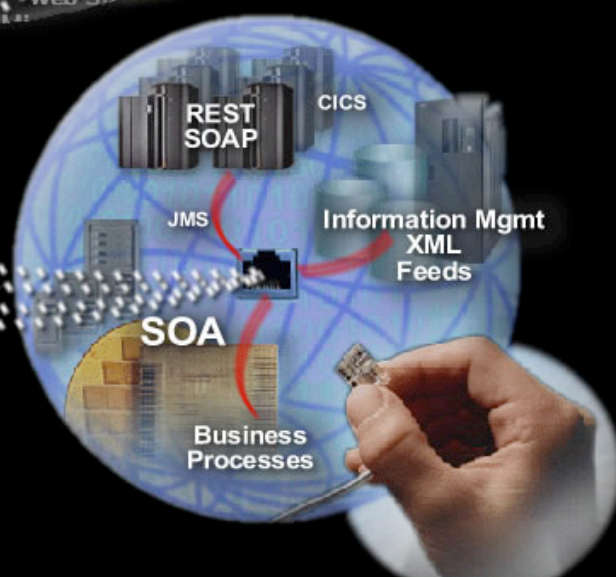
Source_id	Account_id	Area_description	Notam_id	Part	
K	KL	KKL, CLEVELAND, OH, US, (734191N, 834623W) [CLE]	1/938	1/1	Thu
K	KL	KKL, CLEVELAND, OH, US, (912861N, 77975W) [CLE]	3/281	1/1	Thu

A
D

*wait wait,
there more...*

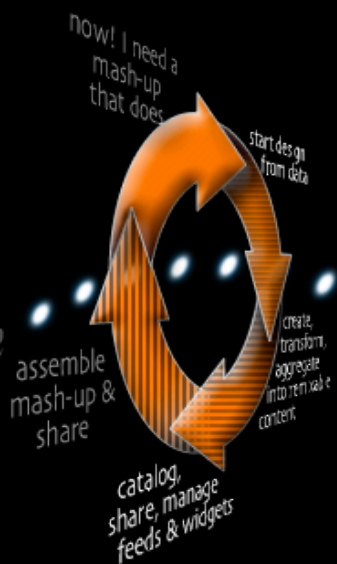


**Business
Mash-able
Assets**



Remixability - beyond the desktop...

...how do I
make my
data mash-able



widget
composition



Enterprise
mash-ups

Remixability - beyond the desktop...



... mobility matters, through the Browser

Impact of *Informational* Widgets

The widgetization of the web is about recomposing & customizing content by non-techies

- ~13,000 Google Gadgets & portal
- ~ Yahoo Widgets
- OAA – Widget specification

Enterprise recognizing widget composition as an emerging approach to address content integration - esp. media companies



Widgets are becoming portable from desktop to mobile devices with minimal additional development costs

Impact of *Informational* Widgets

The widgetization of the web is about recomposing & customizing content by non-techies

- ~13,000 Google Gadgets & portal
- ~ Yahoo Widgets
- OAA – Widget specification

Enterprise recognizing widget composition as an emerging approach to address content integration - esp. media companies

Widgets are becoming portable from desktop to mobile devices with minimal additional development costs

Impact of *Informational* Widgets

The widgetization of the web is about recomposing & customizing content by non-techies

- ~13,000 Google Gadgets & portal
- ~ Yahoo Widgets
- OAA – Widget specification

Enterprise recognizing widget composition as an emerging approach to address content integration - esp. media companies

Widgets are becoming portable from desktop to mobile devices with minimal additional development costs

Conclusions

- Enabling IT to transform into a partner with LOBs to engage on new business opportunities
- Mobile webApps are coming - task-oriented users experiences means “widgetizing” actions that can be knitted together instantly
- Can we slice & dice massive amounts of Enterprise ecosystem data into remixable business value

Enterprise Mash-up Ecosystem - Eating Our Own Cookin'

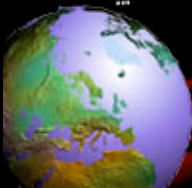
Information Management
 Product Portfolio
 ECM
 Pure XML
 Infomix

Tivoli
 Product Portfolio
 Tivoli Monitoring
 Tivoli Provisioning

WebSphere
 Product Portfolio
 Portal
 Commerce
 Connectors

Lotus
 Connection
 Quickr
 Notes

Rational
 Product Portfolio
 Jazz,
 ConfigMgmt



Title	Tags	Date	Author
Access Test			Der Goff
American Express Entertainment Offers			Der Goff
Maritime Attacks from 2006		May 11, 2007	Der Goff
NCAA Weather Alerts		May 8, 2007	Der Goff
NY Times News Feed			Der Goff
Popular Delicious Top		May 10, 2007	Der Goff
Programmatic Web Tools		June 1, 2007	Der Goff
QDORs	Pushbutton, Yahoo, QDORs		Der Goff
Smoking Ornaments		June 20, 2007	Der Goff
San Jose US Listing	Real Estate	June 20, 2007	Der Goff
Top News Stories	Yahoo, Yahoo News	May 8, 2007	John Soren
TV Guide Robotics	Television, Robot	June 11, 2007	Der Goff
Avian Flu Page	aviary, yahoo, wikipedia	May 8, 2007	Der Goff
USDA Bird Flu Videos	Influenza, USDA, Deep	June 1, 2007	Der Goff
Feed Filter	Feed, rss, rss2, rss	May 16, 2007	Max White
Yahoo Finance Charts	Finance, charts, yahoo	May 20, 2007	Der Goff
Yahoo Finance Feed Widget	Finance, yahoo	May 20, 2007	Der Goff
Yahoo Geocoder	geocode, yahoo	May 20, 2007	Der Goff
Yahoo Image Search	search, image, yahoo	May 8, 2007	Der Goff
Yahoo Sports News	Yahoo, yahoo, news, sports	May 8, 2007	Der Goff
BBC Cycling News	Cycling, News	June 15, 2007	Der Goff

Drag & Drop Customization

The collage shows several examples of mashups:

- Tivoli Dashboard:** A dashboard with charts and data visualizations.
- City of New York Metropolitan Transportation Authority Mashup:** A complex dashboard with a map, search filters, and data tables.
- AccuWeather.com:** A weather dashboard with a map, temperature, and weather icons.

Innovation in the widget arena



MySpace: Why We Block Widgets
Michael Arrington 58 comments