

Good morning.

Today we're going to be talking about weblogs in the corporate intranet as tools for personal knowledge management,

and how we, as the library, might help the organization use weblog output for organizational KM.

Overview



Roadmap for enterprise weblog/k-log information services

2



Different approaches to blog services & success factors



Choosing your solution

We're going to be talking about the problems blogs present in terms of making their output findable.

What we're seeing with weblogs is a focus on **bottom-up knowledge creation**.

These grass-roots efforts are beginning in some cases to capture tacit knowledge -- the stuff that usually gets extracted in conversations.

But they present a problem in that they introduce distributed data that is often not collected and indexed for redistribution as an aggregate.

The roadmap I'll present is really a discussion starter for information services related to blogs. We'll look at some options to consider with the assumption being that we want weblog output to surface in the right places -- to prevent the invisibility of captured knowledge.

We'll also talk about connecting blog output to other types of enterprise information.



3

I work for an integration group in the library that works between the various clients, content owners, researchers and systems group.

I provide the information architecture, interaction design, and site development guidance on our projects.

This talk documents some of the investigation I'm doing to position the library with regard to blogs in the enterprise.



My organization provides the physical and digital library services for Lucent. We're a Bell Laboratories organization and traditionally supported researchers, but now provide services predominantly to business users.



A few things I assume you know coming here today...

You know what weblogs are. Basically they're a form of personal or community web publishing usually in journal-writing style.

You've heard of a few. Some popular ones are listed here.

And you know of a few applications you can use to publish a weblog.



There are a few concepts I refer to that we should have a common understanding of.

When I refer to **enterprise blog creation services**, I'm talking about providing a way for your users to publish their weblog with some centralized software controlled by you or your CIO.

When I talk about **XML feed services for databases**, I'm talking about providing **RSS feeds** for any type of data source that exists in the enterprise that you want to be available across systems.

For instance, you might want to share feeds from your documents repository or Factiva news source. The closest analogy of this service on the web is Feedster, an RSS search engine and aggregator.

These feeds are used by RSS readers -- basically to help bloggers with their own knowledge creation via weblogs.



Fnally I talk about enterprise aggregation services.

This is typical systems work of aggregating and redistributing data from various sources, but now applied to weblog output. Again, this like Feedster.



I think it's important to note **some of the reasons people are using weblogs for KM** in the first place and why **this can be a good thing** for your organization.

While the ease of installing the technology to publish a weblog has a lot to do with the increase of personal web sites, the drive to self-publish probably has more to do with the need to share and incubate ideas, to grow knowledge within communities, and to make connections.

These needs aren't new, but there are reasons why the current trend towards weblogs are a good idea.

So... why weblogs for KM?



Reason #1 is that diversity is a good thing.

You may know **Bonnie Nardi and Vicki O'Day's article** on Information ecology. They introduced the idea that the business landscape could be viewed using the analogy of ecologies.

The thinking here is that in an information ecology, a diverse number of entities can exist. A diverse set of people and technologies working in a complementary way makes for a healthy ecology.

If you're familiar with the **ClueTrain Manifesto**, those authors also discuss locally controlled knowledge as a good thing.

They say the businesses that will succeed are those that enable individuals to converse directly with the organization and with customers.

The key message here is that bottom up conversations are good thing.

A: The new KM is a bottom up effort

- Deloitte: Bridging the gaps between people and systems depends on first creating the conditions that allow people to participate in KM locally rather than enforcing technologybased KM policies. These local activities are bridged in loosely coupled Knowledge Networks.
- Forrester: Organizations have begun to move away from single-solution KM packages.



Reason #2, Because KM is a bottom-up effort, it's probably more likely to succeed than top-down propositions.

And market researchers had this to say about KM and software.

Deloitte talks here about using knowledge systems to bridge locally created knowledge. This is the idea of loosely coupled systems.

Forrester is noting that organizations have begun to move away from single solution. top down KM tools.



So with these ideas in mind, what does this mean to libraries?

It means that we're **well-positioned** to help our organizations connect the pieces in our information ecologies by taking on the role of aggregator and disseminator of this locally produced knowledge.

- * pulling together means merely grabbing data using XML
- * part of this gluing may include organizing or indexing the data
- * and finally we'll need to find ways to integrate this data into our current systems



Now we're going to talk about the possible stages for integrating blog output into systems.

We'll also take a look at how weblogs relate to other types of enterprise information.



So this is the roadmap. These are milestones -- the large targets. This is REACTIVE strategy -- a way to prepare for the growth of weblogs.

* **At the near end** we are grappling with how to support knowledge creation -- and that's by providing feeds of our data or tools for publishing.

* In the middle we're attempting to provide basic distribution of the knowledge in the enterprise

* **At the far end**, we're approaching an infrastructure of loosely joined information systems to relate and connect knowledge to various information management resources such as taxonomies and are looking for ways to perhaps better enable active use of these assets with social software

On the way to the far off points, we have a lot of cultural aspects to consider, which may affect your mileage and alter your course. But this is a basic plan towards that integration at the far end.



For me, this roadmap is a component of a larger information architecture vision for the enterprise.

You know the conventional methods for centralized IA. They include taxonomy and thesaurus design, metadata, content mangament.

At its core, weblogs are bottom up efforts. The narrow view presented by my roadmap shows how weblogs might fit into the enterprise web services model.

This also fits into Lou Rosenfeld's roadmap for enterprise information architecture as a component he calls "Guerrilla IA".

The comparison here is that if things such as metadata and CMS are core tools of EIA, then blog aggregation is the core tool of Guerilla IA.

Feeding the Guerrillas

- Guerrilla IA: keep knowledge creation close to the owners/creators of that knowledge
- Result of widespread Guerrilla IA: diverse "information ecology", decentralized content sphere with disparate users and technologies behind the content
- Diversity supported by **knowledge networks** created out of EIA efforts

15

The advantage of Guerilla IA is that it keeps knowledge creation close to the knowledge creators. This makes blogs **as intimate as one to one conversations**. This closeness of the owner to the product -- the output -- is what might help sustain weblogging as a model for individual KM.

The result of this form of knowledge creation is a diverse information ecology with data creators all over the enterprise.

We're working with the spread out model here and bringing things back together.



Here's an good point made by Lilia Effimova, a PhD student who's profilfic on the topic of blogs.

Grassroots creation can be amazingly simple as regards technology.

While the tools themselves are simple, they also offer a degree of complexity with regards to classification and creating social connections that makes them powerful applications in the hands of even novice users.

This is part of the **reason why they're used so much** and part of the reason why **we want to exploit** them as vehicles for knowledge management and business networking.

So let's look at the types of connections that are possible with these tools.



Here's some screenshots showing how people build connections using built in tools such as comments or by manually listing related subject area experts in blogrolls.

The first example here shows how comments are added to a blog. This is Victor Lombardi's IA blog.

The second example shows how an author points to their favorite blogs. This is Matt Jones' IA blog.



More complex connections ca be seen by embedding related content on other sites using plug-in tools such as waypath, by allowing others' to ping your site using another method called trackback, or by using the Google API to fetch URLs by keyword or using blog entry titles.

The example here shows how links are embedded into a blog entry by Judith Meskill using Waypath..



Topic-based indexes such as DiceLaRed can watch a stream of blog entries and show which topics are most popular within a watched set on any given day.

Popularity indexes such as MIT's Blogdex are used to follow the most linked to blog entries on any day.



If we take a step back, we start to realize that **making connections** is really a big part of what weblogging is about.

From a systems perspective, there are ways we can help people make further connections by **watching for the explicit** relationships found in information we already have -- by watching what people publish and how they use information.

From there, we might be able to connect authors to topics, users to business units or projects, library users to topic tracking interests.



This chart shows the types of relationship that might be extracted through blogs.

The left column shows the extraction type or method.

• Explicit relationships identified by authors. This is a knowable realm.

• Emergent relationships are those that can be observed through patterns of pointing and referring, done by the author and by readers. This is a discoverable realm that relies heavily on machine parsing and analysis.

The middle column shows where relationships are being extracted from.

The **right column** shows some technologies supporting this extraction.



If we broaden our view, we might consider other relationships that can be found by watching the interests of users in information nuggets they publish, in topic tracking interests they record, etc.

We can turn patterns of use into describable entities.

The idea is to clearly define those entities and create rules for the extraction of those entities from various forms of published matter.

For instance, take a hypotentical person named "**John Doe**". Let's say John is interested in "WiFi as a topic" We might know that because he's published papers on the topic in one of our known sources.

What we need to do is let the system look for these cues and to distinguish that "John Doe" is a known person and that "WiFi" is a known topic and connect those 2 entities.



I think this is what makes weblogs interesting to the organization -- integrating different types of knowledge in the enterprise might bring communities and individuals closer together around shared interests.

This screenshot represents how this far off goal might look to users.

We're creating knowledge networks that are loosely coupled by allowing systems to talk to each other.

We're **extracting** bits of explicit knowledge and **inferring and suggesting the relationships** of people to concepts, concepts to concepts, and people to people.

This could be the role of the knowledge-based information system.



Those previous slides should tell you that your roadmap must be able to bend with the changing weblog environment. There are clearly social and cultural elements that will affect how you react to a grassroots knowledge ecology.

The roadmap is pretty simple, but the process and resources needed to get there might not seem so trivial. So let's look at some approaches.



- Seems to me there are **three different approaches** or strategies
 - Centralized
 - Decentralized
 - Mediated

We're going to look at three different approaches, starting with a centralized approach.

Centralized approach

- One enterprise weblogging and news feed aggregation application
 - Integrated news aggregator
 - Integrated classification / controlled vocabularies (subject, author. etc.)
 - Integrated publishing

This approach is one where publishing, organizing, and distribution are centrally controlled.



Here are some factors needed to succeed wit this approach.

The centralized approach requires standard processes, so this means understanding how people work.

This probably means this approach works best with smaller organizations.

This approach also requires a lot of user research and continuous communication and training.



A centralized approach makes administration easier and allows more complexity in terms of features. I'll show some examples of this in minute.



Blog content creation goes in through a centralized tool or website.

The data gets parsed and autoclassified and then served. One advantage of a centralized tool is that bloggers could use a single controlled vocabulary for adding index terms to their entries.

Creation, publication and distribution are all done through one system.



Using a centralized approach you might use an enterprising publishing application like Traction software.

Traction allows people to use email to post to the enterprise blog, and because email is a technology that most people are comfortable with, it's not very disruptive. It doesn't have a steep learning curve.



Here's another example from Traction showing weblogging can be **a bit more complex**. Their tool allows **annotation at the paragraph level.**

This example is actually using Traction for **collaborative authoring** of a product requirements document. Note the status flags. users here are actually changing the status of bullet point as they evolve this document.

When you're dealing with one centrally-controlled platform, the advantages in terms of functionality become pretty clear, I think.

Decentralized

- Many diverse / disparate publishing applications including weblogs
- Common XML output format
- XML feed aggregator
- Search service with possible auto-classifier

32

Now the decentralized approach. This approach allows many blogs to exist anywhere.

It relies on common XML outputs for collection.

Brings that together with a feed aggregator.

And provides access via a search service with possible auto-classifier.

Success factors and benefits

- Perhaps the easiest to execute
- Supports diversity; gives users freedom to choose tools that match their processes
- Requires the least amount of effort and human resources on the system side
- Requires the considerable financial investment
- May not provide the most relevant results through machine classification

33

This is perhaps the easiest approach to execute.

It supports diversity and let's users choose their tools.

It requires the least amount of effort and human resources.

But it requires a good deal of initial financial investment

and may not provide the most relevant results because we're relying on machine classification. The tools you can buy for the search and retrieval are getting better all the time, however.



In the decentralized approach, knowledge creation happens anywhere and a machine collects the XML output.

Some autoclassification might be done when the feeds enter the system.

Then the server redistributes the aggregate when people search.



One way we help support a diverse set of bloggers is by giving them RSS feeds for our databases. They use these in their RSS readers to track topics without leaving the firewall.

Mediated

- Many diverse / disparate weblogging applications
- Common XML output format
- Possible shared controlled vocabularies for classification upon blog creation
- XML feed aggregator
 - Some auto-classification
 - Human mediation
- Enterprise search with some auto-classification
- 36

The last approach involves more human involvement on the systems end.



This approach requires more resources, but supports diversity and gives users control of their tools.

This may provide the best results, however, because classification is reviewed and corrected by humans.



Using this approach, once again, knowledge creation happens anywhere.

A feed collector grabs XML output and then we do some clustering and auto classification using a subject taxonomy.

The content is reviewed by human indexers and then stored for re-publishing and distribution.



Here's an example of an RSS aggregator called k-collector that pulls weblog output and re-publishes content using a faceted approach.

Reactive versus proactive strategy

- Best bet is a reactive strategy (decentralized and mediated): Focus on watching information publishing and usage behaviors (including weblog-related activity).
- More burdensome is the proactive strategy (centralized): Urge people to participate in knowledge creation efforts.

40

Here's my take on coming up with a strategy.

I think my organization would do best to stay reactive -- using the decentralized or mediated approaches

I don't think we would ever urge people to participate in weblogging

As an aside, we're starting to consider the prospect of doing weblogging ourselves to bring alternative sources for information to or customers' attention.



I like the idea of capturing information about what our users write in self-published weblogs, in what they write in printed publications, and in the subject preferences they specify in our library system through topic tracking.

41

I think all of this information can potentially be used to help people do their jobs by connecting them to people and resources.

This way of approaching KM seems diverse and organic to me and may have a good chance of succeeding because of that.



42

So if you buy all of this, you'll eventually get to the question of "how do we do this?".



Finding the solution that fits your ecology depends on different factors such as size.

It might seem obvious, but **small groups might find it easiest to go with a centralized solution**. If the group is small enough, no system at all might be the best solution.

Large groups seem to benefit from the decentralized and mediated approaches.

Obviously the human and financial resources needed to initiate and sustain these efforts needs to be considered.



Culture plays probably the largest part in determining how you should proceed.

We have to examine what exists now in the organization and consider issues about openness in knowledge sharing.



Some cultural aspects may prevent weblog growth. For instance,

- a culture of protecting one's own knowledge and self-interests may prevent people from wanting to blog
- corporate policies on publishing information on the intranet may preclude blogging.

• but when and if the interest in blogging appears, the key is to ease knowledge workers into the role of knowledge loggers. Constant communication with bloggers is the key to sustaining your relationship with them.



At some point you'll have to decide if you're going to build your own system or buy the technology.

My organization always builds because there are benefits in terms of customization and integration with our existing systems. We tend to evolve our tools slowly over time.

The downside, of course, is that this requires time and considerable human resources.

Build vs. buy It's easier to buy if you have the resources Pros: Quicker development, possible community of users, technical support Cons: Requires initial investment of money and training, may require investment in consulting services over time

And if you have the money, it may be easier to buy.

47





I think most companies are probably still waiting and evaluation, but I've been told that some companies are actually buying products like Traction Software.

I think the first step of providing XML feeds with bibliographic data for various enterprise databases is a fairly easy one to start with.

Next you can use your existing enterprise search to make blog data findable in a rudimentary fashion, until you're ready to think of your position in terms of aggregation services.

Connecting with bloggers as they appear is the right way to help keep your strategy based on users' needs.

Next steps; dealing with growth

- As blogs mature, embed them into enterpise IA processes using semi-automated methods for classification
- Continue to investigate user needs and features, e.g. Blog creation services, Social networking needs
- Later, consider data analysis tools and integration of knowledge entities (the far off goals)

Vendors to look at

- For blog creation consider content management vendors focussed on blogs
 - Traction; http://tractionsoftware.com
 - Userland Radio; http://userland.com/
 - Six Apart; http://sixapart.com (Pro Version?)
 - Drupal; http://drupal.org
 - .Net developers (because some IT groups are married to MS)

Consider scripted/cached models versus static page builders

51

Vendors to look at (continued)

- For more robust content management, consider CMS vendors with taxonomy focus
 - Stratify; http://www.stratify.com
 - Inmagic; http://www.inmagic.com/

52

Vendors to look at (continued)

- If only throwing search at the problem, consider enterprise search vendors
 - Verity K2 Classification Suite; http://verity.com
 - Autonomy Enterprise Search; http://autonomy.com
 - Endeca ProFind; http://endeca.com
 - Convera RetrievalWare; http://convera.com
 - InQuira; http://www.inquira.com
 - Applied Semantics; http://appliedsemantics.com

<section-header><section-header><section-header><section-header><text><text><text>

54