THE DISCIPLINE OF ORGANIZING

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Outline

- Prologue
- We Organize Things, Documents, Information...
- The Concept of “Organizing System”
- Organizing Organizing Systems
- Epilogue
Since 2005 I have taught the required course for entering professional students at Berkeley’s "Information School" – one of 33 (ischools.org)

The ISchools span the range from traditional library schools to informatics and computer science programs

They are all "interested in the relationship between information, people and technology"...
Is “Organizing” a Discipline?

- “Organizing” is a fundamental issue in many disciplines
- But they don’t agree in how they approach problems of organizing and in what they seek as solutions
  - Library and information science: public sector bibliographic perspective, prescriptive solutions
  - Computer science, informatics, content mgmt: information-driven business applications, emphasizing architecture and implementation, reuse
We Organize…

- Things
- Information
- Information about Things
- Information about Information about {Things, Information}
- …
We Organize…

- Most people have a notion of LIBRARY, MUSEUM, BUSINESS INFORMATION SYSTEM, and a few other common institutions that organize collections of various kinds
- Most people also have PERSONAL COLLECTIONS of things or information
Library

Bancroft Library, UC Berkeley
Museum

Louvre, Paris – with Mona
Archive
Human Resource Organization

Figure 1a
Organizational Structure

President

VP Operations

Mgr Purchasing
Vendor Relations
Forecasting

Mgr Warehouse
Supv Shipping
Supv Receiving

Director Mgr
Plant Mgr Plant 1
Plant Mgr Plant 2
Plant Mgr Plant 3

Mgr Information Technology
Supv Network Services
Supv Mfg Systems

Mgr Engineering
Mgr Development
Mgr Mfg Engineering
Mgr Maintenance

Continued on Figure 1b
Personal Stamp Collection
Personal Document Collection
The Web & Digital Libraries
Internet Archive – archive.org
Retail Store
Web Retail Store

Hello, robert j glushko. We have recommendations for you. (Not robert?)

The All-New Kindle Family: from $79

Kindle
$79

Kindle Touch
$99

Kindle Fire
$199
Most people also have a notion of different types of documents that have characteristic content, structures, and presentations.

- How does this notion of “document types” fit with how we think about Libraries, Museums, Business Information Systems, and so on?
The “Document Type Spectrum”

from “Document Engineering,”
R. Glushko & T. McGrath, MIT Press 2005
CALL me Ishmael. Some years ago—never mind how long precisely—having little or no money in my purse, and nothing particular to interest me on shore, I thought I would sail about a little and see the watery part of the world. It is a way I have of driving off the spleen, and regulating the circulation. Whenever I find myself growing grim about the mouth; whenever it is a damp, drizzly November in my soul; whenever I find myself involuntarily pausing before coffin warehouses, and bringing up the rear of every funeral I meet; and especially whenever my hypos get such an upper hand of me, that it requires a strong moral principle to prevent me from deliberately stepping into the street, and methodically knocking people’s hats off—then, I account it high time to get to sea as soon as I can. This is my substitute for pistol and ball. With a philosophical flourish Cato throws himself upon his sword; I quietly take to the ship. There is nothing surprising in this. If they but knew it, almost all men in their degree, some time or other, cherish very nearly the same feelings towards the ocean with me.
Product Catalog

### Industrial Or Light Weight Bags On A Roll

Bags are perforated allowing easy tear off for in-store or assembly line use. Choose industrial 2-mil or extra heavy 4-mil for parts fittings and hardware. Lightweight bags are .5 mil and ideal for produce and lighter weight items. Table or wall mount dispenser available below.

#### Industrial Bags On A Roll

<table>
<thead>
<tr>
<th>Size (In.)</th>
<th>Bags Per Roll</th>
<th>Part No. 2 Mil</th>
<th>Price</th>
<th>Part No. 4 Mil</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 x 6</td>
<td>1000</td>
<td>88400LU</td>
<td>25.55</td>
<td>88430LU</td>
<td>45.55</td>
</tr>
<tr>
<td>6 x 9</td>
<td>1000</td>
<td>88403LU</td>
<td>39.15</td>
<td>88433LU</td>
<td>59.90</td>
</tr>
<tr>
<td>8 x 10</td>
<td>1000</td>
<td>88406LU</td>
<td>47.15</td>
<td>88436LU</td>
<td>85.65</td>
</tr>
<tr>
<td>10 x 12</td>
<td>1000</td>
<td>88409LU</td>
<td>68.25</td>
<td>88439LU</td>
<td>125.30</td>
</tr>
</tbody>
</table>

Discount per part no.: Less 5% 12-23 rolls; 15% 24 rolls or more.

#### Lightweight Bags On A Roll

<table>
<thead>
<tr>
<th>Size (In.)</th>
<th>Bags Per Roll</th>
<th>Part No. .5 Mil</th>
<th>Price Per Carton of 2 Rolls</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 x 15</td>
<td>2000</td>
<td>88080LU</td>
<td>52.80 11-23 50.16 24+</td>
</tr>
<tr>
<td>10 x 20</td>
<td>1500</td>
<td>88085LU</td>
<td>52.80 11-23 50.16 24+</td>
</tr>
<tr>
<td>Dispenser</td>
<td>16000</td>
<td>88090LU</td>
<td>17.80 each</td>
</tr>
</tbody>
</table>

Discount per part no.: Less 5% 5-11 rolls; 10% 12-23 rolls; 15% 24 rolls or more.

### Lay-Flat Poly Tubing Rolls

Simply cut tubing to your exact length and seal with the Consolidated Impulse Heat Sealer found on page 80. Choose 2 mil or 4 mil tubing stock. Ideal for a variety of different size parts. FDA approved.

#### 2 Mil

<table>
<thead>
<tr>
<th>Part No.</th>
<th>W x L (In. x Ft.)</th>
<th>Price/Roll</th>
</tr>
</thead>
<tbody>
<tr>
<td>89965LU</td>
<td>2 x 2100</td>
<td>33.66</td>
</tr>
<tr>
<td>89967LU</td>
<td>3 x 2100</td>
<td>39.40</td>
</tr>
<tr>
<td>89968LU</td>
<td>4 x 2100</td>
<td>55.90</td>
</tr>
<tr>
<td>89969LU</td>
<td>5 x 2100</td>
<td>63.85</td>
</tr>
<tr>
<td>89971LU</td>
<td>6 x 2100</td>
<td>62.66</td>
</tr>
<tr>
<td>89978LU</td>
<td>8 x 2100</td>
<td>78.64</td>
</tr>
<tr>
<td>89981LU</td>
<td>10 x 2100</td>
<td>94.40</td>
</tr>
</tbody>
</table>

#### 4 Mil

<table>
<thead>
<tr>
<th>Part No.</th>
<th>W x L (In. x Ft.)</th>
<th>Price/Roll</th>
</tr>
</thead>
<tbody>
<tr>
<td>89980LU</td>
<td>2 x 1050</td>
<td>33.66</td>
</tr>
<tr>
<td>89982LU</td>
<td>3 x 1050</td>
<td>39.40</td>
</tr>
<tr>
<td>89983LU</td>
<td>4 x 1050</td>
<td>55.90</td>
</tr>
<tr>
<td>89984LU</td>
<td>5 x 1050</td>
<td>63.85</td>
</tr>
<tr>
<td>89986LU</td>
<td>6 x 1050</td>
<td>62.66</td>
</tr>
<tr>
<td>89989LU</td>
<td>8 x 1050</td>
<td>78.64</td>
</tr>
<tr>
<td>89992LU</td>
<td>10 x 1050</td>
<td>94.40</td>
</tr>
</tbody>
</table>

Discount per part no.: Less 5% 5-11 rolls; 10% 12-23 rolls; 15% 24 rolls or more.
Content Management for Single-Source Publishing
Drop Shipment Business Model: Choreography of Services
Supply Chain

Tier 3

Tier 2

Tier 1

Enterprise

Materials

Products

Customers

Retailers
Real-Time Information About Supply Chains

Tracking Detail

Delivered

Delivered On:
Tuesday, 11/15/2011 at 3:21 P.M.
Left At:
Porch

Additional Information

Shipment Progress

<table>
<thead>
<tr>
<th>Location</th>
<th>Date</th>
<th>Local Time</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>San Pablo, CA, United States</td>
<td>11/15/2011</td>
<td>3:21 P.M.</td>
<td>Delivered</td>
</tr>
<tr>
<td></td>
<td>11/15/2011</td>
<td>5:12 A.M.</td>
<td>Out For Delivery</td>
</tr>
<tr>
<td>San Pablo, CA, United States</td>
<td>11/14/2011</td>
<td>11:27 A.M.</td>
<td>Arrival Scan</td>
</tr>
<tr>
<td>Roanoke, VA, United States</td>
<td>11/10/2011</td>
<td>3:27 A.M.</td>
<td>Departure Scan</td>
</tr>
<tr>
<td>Roanoke, VA, United States</td>
<td>11/08/2011</td>
<td>5:32 P.M.</td>
<td>Origin Scan</td>
</tr>
<tr>
<td>United States</td>
<td>11/08/2011</td>
<td>11:54 P.M.</td>
<td>Order Processed: Ready for UPS</td>
</tr>
</tbody>
</table>
Real-Time Information About Information

<table>
<thead>
<tr>
<th>MY MARKETS</th>
<th>U.S.</th>
<th>EUROPE</th>
<th>ASIA</th>
<th>CURRENCY/RATES</th>
</tr>
</thead>
<tbody>
<tr>
<td>DJIA*</td>
<td>12096.16</td>
<td>17.18↑</td>
<td>0.14%</td>
<td>2696</td>
</tr>
<tr>
<td>Nasdaq*</td>
<td>2688.20</td>
<td>28.98↑</td>
<td>1.09%</td>
<td>2688</td>
</tr>
<tr>
<td>S&amp;P 500*</td>
<td>1257.81</td>
<td>6.03↑</td>
<td>0.48%</td>
<td>2657</td>
</tr>
<tr>
<td>Global Dow</td>
<td>1834.94</td>
<td>12.44↑</td>
<td>0.87%</td>
<td>2644</td>
</tr>
<tr>
<td>FTSE 100*</td>
<td>5517.44</td>
<td>1.60↓</td>
<td>0.03%</td>
<td></td>
</tr>
<tr>
<td>Nikkei Average*</td>
<td>8541.93</td>
<td>61.77↓</td>
<td>0.72%</td>
<td></td>
</tr>
</tbody>
</table>

* at close  Source: Dow Jones, SIX Telekurs, ICAP plc  4:05 P.M. 11/15/11

MARKET NEWS ▫ H-P and Intel Pull the Blue Chips Up
Motivating the Concept of “Organizing System”

- We can emphasize how all of these examples differ… or we can emphasize what they have in common
- They are all “Organizing Systems”
  - A collection of resources
  - Intentionally arranged
  - To enable some set of interactions
The Organizing System [2]

- RESOURCES are “anything of value that can support goal-oriented activity”
- A COLLECTION is a set of resources that have been selected for some purpose
- A collection is also a resource but because collections are an important and frequently used type of resource we distinguish them as a separate concept
The Organizing System [2]

- INTENTIONAL ARRANGEMENT captures the idea that the system requires explicit or implicit acts of organization by AGENTS – human or computational ones

- These arrangements follow or embody one or more ORGANIZING PRINCIPLES, “directives for design” that are expressed in an abstract or logical way that does not constrain their implementation
Intentionality in Organizing Systems

• The Grand Canyon contains information in its organization but is not an organizing system.

• Organizing systems exist because of some intentional acts to enable interactions ... where we can identify the agent(s).
The Three-Tier Model

<table>
<thead>
<tr>
<th>In Software Architecture</th>
<th>In the Library Organizing System</th>
</tr>
</thead>
<tbody>
<tr>
<td>User Interface / Presentation Tier</td>
<td>Library Services</td>
</tr>
<tr>
<td>Business Logic / Application Tier</td>
<td>Classification</td>
</tr>
<tr>
<td>Storage / Data Tier</td>
<td>The Books</td>
</tr>
</tbody>
</table>

This separation of content from its organization and presentation is familiar to software and document architects.
The Organizing System [3]

- INTERACTIONS include any activity, function, or service supported by or enabled with respect to the resources in a collection or with respect the collection as a whole.

- Interactions can include access, reuse, copying, transforming, translating, comparing, combining… anything that a person or process can do with the resources.
The Activities of Organizing Systems

- We can identify four (five?) activities in the lifecycle of every organizing system:
  - (Creating resources?)
  - Selecting resources
  - Organizing resources
  - Providing resource-based interactions and services
  - Maintaining resources
Stop and Reflect…

• Does the definition of “Organizing System” apply to all of the types of collections, documents, and information services we’ve seen?

• Is it OK to use more abstract terms like “resource,” “interaction,” and “maintenance” instead of more specific and domain-specific terms?

• Cataloguing vs. Organizing
• Curation, governance vs. Maintenance
• …
Resources...

In the Library?  In the Zoo?

On the Web: Universal Resource Identifiers (URIs)
Organizing Organizing Systems [1]

- We can classify organizing systems by:
  - resource type
  - dominant purpose
  - creator
  - size of intended user community
  - or many other ways

- But these classifications overlap and don’t have clear boundaries
Organizing Organizing Systems [2]

- "Memory institutions" - libraries, archives, and museums
- Enterprise collections - business content, business data and knowledge management, web-based services
- Collections of structured information
- Collections of unstructured or semi-structured information
- Personal collections vs. institutional collections
- …
A Library
A Library?

2012 Catalog

Welcome to our catalog for the 2012 growing season. It features over 150 varieties of seed, 60 of which were grown locally. With your support, we can continue to grow, package, and celebrate heirloom and open-pollinated varieties of garden seed right here in upstate New York. Browse our catalog by navigating the categories to the left or by using our full catalog quick-order page below.

About Our Seed Packs

Our Art Packs are frameable art with seeds inside. $3.75 each ($3.25 for members). Click here to see all of our Art Packs. Our Library Packs contain seed grown and processed in the Hudson Valley by small, sustainable farms, mostly on our own farm here in Accord, New York. $2.75 ($2.25 for members).

Our Garden Packs contain seed provided by responsible wholesalers. $2.75 ($2.25 for members).

Members get a deal on all packs; click here to learn more or join today!

Arugula

- **Arugula**: Roquette into taste heaven with fast-growing and plentiful arugula.
- **Arugula**: Bright and potent green, delectable in the cooler months.
- **Wild Arugula**: Smaller, punchier, and harder than standard arugula, the wild strain is beautiful and delicious.

Asian Greens

- **Baby Bok Choy**: A diminutive and tender Bok Choy which has an extreme cuteness quotient.
- **Bok Choy**: The stir-fry green par excellence.
- **Komatsuna**: Extremely cold hardy, ultra-mild Asian mustard green. Almost as sweet as napa cabbage, but even easier to grow.
A Library?

WIKIPEDIA

- **English**
  - *The Free Encyclopedia*
  - 3,861,000+ articles

- **Deutsch**
  - *Die freie Enzyklopädie*
  - 1,355,000+ Artikel

- **Русский**
  - *Свободная энциклопедия*
  - 817,000+ статей

- **Italiano**
  - *L’Enciclopedia libera*
  - 886,000+ voci

- **Português**
  - *A enciclopédia livre*
  - 712,000+ artigos

- **Español**
  - *La enciclopedia libre*
  - 864,000+ artículos

- **Français**
  - *L’encyclopédie libre*
  - 1,208,000+ articles

- **Polski**
  - *Wolna encyklopedia*
  - 874,000+ hasęt

- **中文**
  - *自由的百科全书*
  - 398,000+ 条目
Natural History Museum - Animals

*Museum national d’histoire naturelle, Paris*
Is a Zoo a Museum?
Is an Animal Theme Park a Museum?

Sea World, San Diego - with “Shamu”
Is an Animal Theme Park a Zoo?

Sea World, San Diego - with “Shamu”
Two Implementations of a Personal Contacts Collection
“Design Space” or “Dimensional” Perspective

• Instead of categories like LIBRARY or MUSEUM or BUSINESS INFORMATION SYSTEM, consider a specific organizing system as a point in a multidimensional design space and these categories as regions in that space...

• This helps us identify the essential properties and “family resemblances” among organizing systems
The 5 Dimensions of an Organizing System

• What Is Being Organized?
• Why Is It Being Organized?
• How Much Is It Being Organized?
• When Is It Being Organized?
• Who (or What) is Organizing It?
What Is Being Organized?

• Identifying the unit of analysis is a central problem in every intellectual or scientific discipline - and in every organizing system.

• Resources that are aggregates or composites of other resources, or that have internal structure, pose questions about the granularity of their "thingness".

• We might need to organize and manage the granular resources, the composite resources, and the relationships between them - all at the same time.
How Many Things?
How Many Things?

manner of a pauper] as a poor person; i.e., without paying
court costs [to initiate litigation in forma pauperis]

in-formation (in'far-mā'shan) n. [ML. information <
OFr. information < L. informatio, a representation, outline,
sketch]. 1. an informing or being informed; esp., a
telling or being told of something 2. something told; news;
intelligence; word 3. knowledge acquired in any manner;
facts; data; learning; lore 4. a person or agency answering
questions as a service to others 5. in information theory
and computer science, a precise measure of the information
content of a message, measured in bits and ranging from
zero when the entire message is known to some maximum
when nothing is known of its content 6. any data that can be stored in and retrieved from a computer

Law an accusation, under oath, of a criminal offense, not
by indictment of a grand jury, but by a public officer, such
as a prosecutor —in'for-ma'tional adj.

SYN. —information applies to facts that are gathered in any
way, as by reading, observation, hearsay, etc., and does not
necessarily connote validity [inaccurate information]; knowledge
applies to any body of facts gathered by study, observation, etc.
and to the ideas inferred from these facts, and connotes an under-
standing of what is known [man's knowledge of the universe];
learning is knowledge acquired by study, especially in languages,
literature, philosophy, etc.; erudition implies profound or abstruse
knowledge, power of comprehending the comprehension of many people; wisdom
implies superior judgment and understanding based on broad knowledge
—ANT. ignorance

information theory the study of processes of communication
and the transmission of messages; specif., the study
dealing with the information content of messages and with
the probability of signal recognition in the presence of
interference, noise, distortion, etc.
in-form-a-tive (in'form-ə-tiv) adj. [ML. informativus < L.
infinitus, pp. of informatum (see inform)] giving information;
educational; instructive: also in-form'a-to-ry —
in-form-a-tive-ly adv.
in-form-ed (in'form-əd) adj. having much information,
knowledge, or education

in-form (in'form) n. a person who informs; esp., a
person who secretly accuses, or gives evidence against,
another, often for a reward

in-fra- (in'fra) [< L. infra, adv. & prep., below; for IE.
base see inferior] a prefix meaning below, beneath [infra-

funnel < infundere: see infusion] Anat. any of various funnel-
shaped organs or passages, as a) the extension of the third
ventricle of the brain to the pituitary body b) the calyx of
a kidney c) the ovarian end of a Fallopian tube

in-fu-ri-ate (in'fyoo-rē-ət) vt. -at-ed, -at-ing
[< ML. infuriatus, pp. of infuriare, to enrage < L. in-, in-
furare, to enrage < furia, rage, FURY] to cause to become
very angry; enrage —adj. [Archaic] furious; very angry;
enraged —in-fu'ri-a.tion n.
in-fus-cate (in'fus'kat, -kāt) adj. [L. infuscatus, pp. of
infuscare, to make dark, obscure < in-, in + fuscare, to
darken < fuscus, dark; for IE. base see FURY] darkened or
tinged with brown, as the wings of an insect: also in-fus-
cat-ed (-kāt ed)
in-fuse (in fyōs) vt. -fused, -fus'ing [ME. infusen < L.
infusus, pp. of infundere, to pour in < in-, in + fundere, to
pour; see found] 1. formerly, to pour (a liquid) in, into, or
upon 2. to put (a quality, idea, etc.) into, as if by pouring;
install; impart 3. to fill (with a quality, feeling, etc.);
imbue; inspire 4. to steep or soak (tea leaves, etc.) so as to
extract flavor or other qualities —SYN. see instill —
in-fus'er n.
in-fus-sible (in fyōs'sə bəl') adj. [IN2 + FUSIBLE] that
cannot be fused or melted —in-fus'si-bly adv.
in-fus-sion (in fyōs'shən) n. [< Fr. or L.; Fr. infusion < L.
infusio] 1. the act or process of infusing 2. something in-
fused; tincture; admixture 3. the liquid extract that results
from steeping a substance in water 4. Med. the slow intro-
duction of a solution into the body, specif. into a vein
in-fus-so-ri-an (in'fyoo-so-rē-ən) n. Theol. the doctrine that the pre-
existing human soul enters the body by divine infusion at
conception or birth —in-fus'sion-ist n.
in-fus-sive (in fyōs'siv) adj. tending or able to infuse

in-fu-so-ri-al (in'fyoo-so-rē-əl, -so-rē-əl) adj. of, consisting of,
containing, or having the nature of, infusorians

in-fu-so-ri-an (in'fyoo-so-rē-ən) n. [< ModL. (animalcula) infusoria,
neut. pl. of infusorium, pertaining to infusions (< L. in-
fusus: see infusion) + -AN] 1. any of a former large group
(Infusoria) of microscopic organisms consisting of those
found in infusions of decayed organic matter and in stagnant
water 2. any of a former class (Infusoria) of prot-
zoans found in most water, characterized by cilia which
permit free movement, as paramecia, stentors, etc. —adj.
of this group or class
Primary Resources and Description Resources

• We often designate some resource as primary because it is the focus of our attention

• We often create other resources that are descriptions of or otherwise associated with the primary resource

• We call these “Description resources” (a more general term than “metadata”)
Descriptions as “Package” vs. Descriptions as “Assertions”

• A common view of resource descriptions is as a package or surrogate record for a primary resource

• An emerging view of resource description focuses on each individual statement or assertion about another resource

• This is more typical for assertions about web-based resources and supports the emerging vision of the Semantic Web or of "linked data"
Aggregated Resource Descriptions

Primary Resource

Description Resource 1
Description Resource 2
Description Resource 3
Description Resource 4
Description Resource 5
Description Resource 6
Description Resources Associated with a Primary Resource
A Collection of Physical Description Resources of Physical Resources
A Card from a Card Catalog

Phillips, David Rhys, 1868-
The monastic libraries of Wales, fifth to sixteenth centuries (Celtic and mediaeval periods).

A Digital “Catalog Card”
“Augmented Reality” – Digital Descriptions for Physical Resources
Search Results are Digital Description
Resources for Digital Resources
Printed QR “Quick Response” Codes are Physical Descriptions of Digital Resources
Why Is It Being Organized?

• The essential purpose of an Organizing System is to "bring like things together and differentiating among them”

• But there are always more precise requirements and constraints to satisfy and more specific kinds of interactions to support
Interactions – The Why of Organizing Systems

- Some interactions can be enabled with any type of resource, while others are tied to resource types
  - Some interactions involve symbolic manipulation or information exchange
  - Some interactions involve physical contact
  - Some involve empathic or experiential contact
- Interactions with information resources can be much more varied than those with physical ones because the possible interactions can be any implementable function or service
Some Interactions with Resources

**Search** (Boolean, Keyword, Structure)
**Browse** (Faceted, Social)
**Display** (Listen, Read, Watch, Perform)
**Derivative** (Edit, Annotate, Augment, Mash Up, Transform)
**Copy** (Share, Reproduce)
**Sell** (Exchange, Transact, Resell)
**Protect** (Preserve, Encrypt, Secure)
**Destroy**
**Organize** (Bookmark, Tag, Categorize, Move, Label)
Principles of Organization

• The organization of physical resources is strongly influenced by their material manifestation, and this organization often persists when digitized resources are organized.

• Almost any property of a resource might be used as a basis for its arrangement, and multiple properties are often used simultaneously.

• Two important dimensions for understanding and contrasting resource properties:
  • Intrinsic vs extrinsic properties
  • Static vs dynamic properties
Principles of Organization

Single Resource Properties

<table>
<thead>
<tr>
<th>Intrinsic Static</th>
<th>Extrinsic Static</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>definition:</strong> directly experienced, subject matter, implicit, inherent properties</td>
<td><strong>definition:</strong> assigned to resource, name, identifier.</td>
</tr>
<tr>
<td><strong>examples:</strong> size, color, shape, author, date of creation</td>
<td><strong>examples:</strong> Dewey Decimal</td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th>Intrinsic Dynamic</th>
<th>Extrinsic Dynamic</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>definition:</strong> inherent properties; change over time.</td>
<td><strong>definition:</strong> behavior based properties.</td>
</tr>
<tr>
<td><strong>examples:</strong> skills, experience</td>
<td><strong>examples:</strong> current owner, location, best seller lists</td>
</tr>
</tbody>
</table>
Organizing System: Home Kitchen
Principles of Kitchen Organization

- **Intrinsic static properties**: If you store your pots, frying pans, and baking pans in different cabinets and nest each set by size.

- **Extrinsic static properties**: A spice rack with the spices arranged in alphabetical order.

- **Intrinsic dynamic properties**: If you arrange your milk and other perishable goods by expiration date, a “useful life remaining” property that decreases to zero as the expiration date approaches.

- **Extrinsic dynamic properties**: If you put the most frequently used condiments or spices in the front of a refrigerator or pantry shelf.
Grocery Store: Multiple Organizing Principles
An Individual’s Book Classification System
A DJ Organizes His Record Collection

"This is the Hip-Hop and Dancehall (Jamaican) section of my record collection."

"7" is the format Jamaican singles are still released, and these are two of my 5 baskets. In an ideal world, the baskets are loosely arranged by BPM (Beats Per Minute), roughly how fast the music is. This tells the DJ what records generally mix with what other records.

"When I return hip-hop records to the shelf, they just go in the front of that particular pile, with the net result that stuff that gets played less drifts to the back.."

~87-97 BPMs

~98-110 BPMs
Organizing Principles in Document Architectures

Automotive

- Basic PO
  - Auto Industry Extensions
  - Ford

Same base document

Industry specific extensions

Company specific extensions

Chemical

- Basic PO
  - Chemical Industry Extensions
  - Dow
How Much Is It Being Organized?

• Not every resource needs the same amount of organization
• Not everything is equally describable
• A controlled vocabulary can yield more consistent organization
• The scope and size of a collection shapes how much it needs to be organize
• Are you organizing the resources you have, or do you need to create an organizing system that can apply to resources that you have not yet collected?
How Much Organization?

THE CARPET-BAG

I STUFFED a shirt or two into my old carpet-bag, tucked it under my arm, and started for Cape Horn and the Pacific. Quitting the good city of old Manhatto, I duly arrived in New Bedford. It was on a Saturday night in December. Much
Mixed-Content Moby Dick

I STUFFED a shirt or two into my old carpet-bag, tucked it under my arm, and started for Cape Horn and the Pacific. Quitting the good city of old Manhatto, I duly arrived in New Bedford. It was on a Saturday night in December. Much...

Section title="The Carpet-Bag">
Para>I stuffed a shirt or two into my old carpet-bag, tucked it under my arm, and started for <Location>Cape Horn</Location> and the <Location>Pacific</Location>. Quitting the good city of old <City>Manhatto</City>, I duly arrived in <City>New Bedford</City>, It was on a <Day>Saturday</Day> night in <Month>December</Month>...
Categories

• Categories are embodied in culture, language, and experience – so they are always biased

• The categories developed by individuals to organize a personal organizing system are often highly idiosyncratic

• Institutional categories created more systematically are more rigorous and systematic but can be biased by political or economic considerations
Bias in Cultural Categories
Categories Shaped by Politics

“Light trucks” vs. “Cars” in CAFE regulations
Dewey Decimal Classification

000 Computers, information & general reference
100 Philosophy & psychology
200 Religion
300 Social sciences
400 Language
500 Science
600 Technology
700 Arts & recreation
800 Literature
900 History & geography

600 Technology (Applied sciences)
   630 Agriculture and related technologies
      636 Animal husbandry
         636.7 Dogs
         636.8 Cats
200 Religion

210 Natural theology
220 Bible
230 Christian theology
240 Christian moral & devotional theology
250 Christian orders & local church
260 Christian social theology
270 Christian church history
280 Christian sects & denominations
290 Other religions
When Is It Being Organized?

• When the resource is created
• When it is added to some collection
• Just in time
• Never
• All the time - continuous or incremental
“Just in Case” Organization
Postponing Organization
The Tradeoff
Who or What Is Organizing?

- Authors or creators
- Professional organizers
- Users “in the wild”
- Users "in institutional contexts“
- Automated or computerized processes
The concept of Organizing System unifies a vast body of design and analysis practice.

Thinking in terms of design dimensions overcomes the limitations and inertia of the traditional categories.

It is a generative, forward-looking approach that encourages and accommodates innovation while preserving conventional theory and practice as design patterns.

It enables intelligent conversations between people who didn’t have much common language before.
Epilogue… or a Prologue to a Different Story

“The Discipline of Organizing” will be published by MIT Press in early 2013 (R. Glushko, editor) simultaneously in three different formats:

• As a traditional printed book
• In one or more ebook formats
• As an open content repository to enable collaboration among the ISchools, who will collectively maintain and evolve the content

…but we’re not yet sure how to do all of this!