

IDM

- IDM: Interactive Dialogue Model

Traditional Design Dimensions and IDM submodels

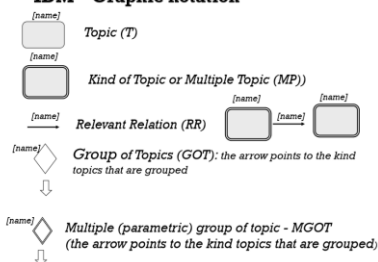
Design Dimensions	IDM	IDM submodels
Content Design	Designing what can be said: what the dialogue is about, and how the different subject are organized and mutually related	C-IDM (content IDM) L-IDM (Logical IDM)
Navigation/ Interaction Design	Designing how to move across pieces of content	P-IDM (Page IDM)
Presentation Design	Designing the visual features of the pages	Not covered by IDM

CONTENT IDM

Basic primitives of C-IDM

Design Issue	C-IDM primitive
What should be said?	Topic Kind of Topic (or "Multiple Topic")
What are the relevant relationships among topics (i.e., the changes of subjects to be supported?)	Relevant relation
How to organize the dialogue contents?	Group of Topics Multiple Group of Topics

IDM – Graphic notation



Topic:

elemento unico, ne esiste solo uno (Per esempio: Museo).

Multiple Topic (o Kind of Topic):

elemento che ha multiple istanze (topic = elemento (meglio tradurlo così)) (Esempio: print)

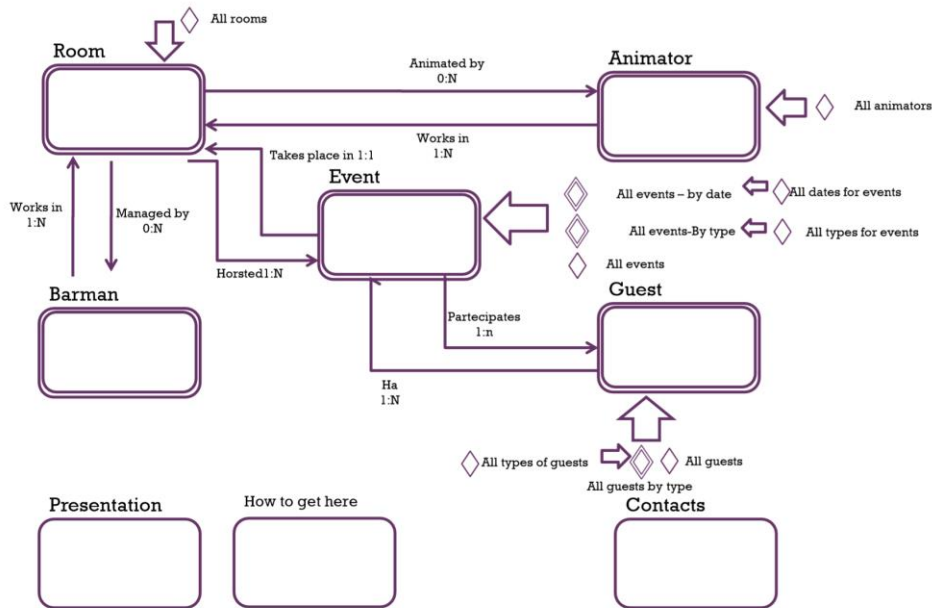
Group of Topics:

Gruppo unico che contiene tutte le istanze di un elemento (Per esempio: All Prints, prints on the theme "landscapes")

Multiple Groups of Topics:

Gruppo che ha multiple istanze (Per esempio: prints of the same theme T, where T is a variable).

- Esempio



ESEMPIO DI DESCRIZIONE TESTUALE

Examples of textual descriptions

(comments in italics)

Topics:

- EXHIBITION: *an introduction to the exhibition*
- MUNCH: *a brief introduction to Edvard Munch*
- CONTACT US: *relevant contacts for this web site*

Kinds Of Topic:

- PRINT: *the description of a print of the exhibition*
- PERIOD OF LIFE: *the description of a specific period of Munch's life*
- ARTIST: *the description of an artist, living during Munch's time*
- ARTISTIC MOVEMENT: *the description of a relevant artistic movement that may have influenced Munch*
- TECHNIQUE: *description of a technique used by Munch for his prints*

Examples of textual descriptions

RELEVANT RELATIONS

CREATED IN: print → period of life; if a print is the subject, you can switch to the corresponding period of life

MADE WITH: print → technique; if a print is the subject, you can switch to the corresponding technique

HAS BEEN USED FOR: technique → prints; if a technique is the subject, you can switch to the prints made with it

CONTEMPORARY: period of life → artistic movement; if a period of life is the subject, you can switch to the artistic movements active at the same time

ACTIVE IN: artistic movement → artist; if an artistic movement is the subject, you can switch to the artists being part of it

GROUPS OF TOPICS:

MASTERPIECES: *those prints that the curator consider the most representatives of the exhibition*

ALL PRINTS: *the complete set of the prints in the exhibition*

TECHNIQUES: *the complete set of techniques used by Munch*

MUNCH'S LIFE: *the complete set of periods of life of Munch*

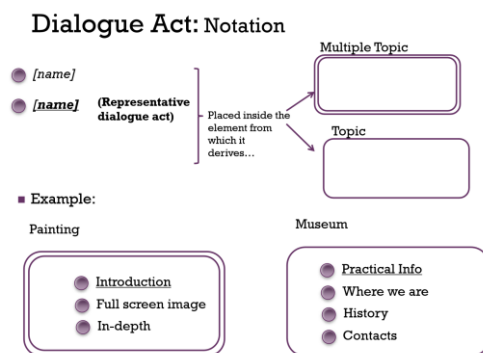
MULTIPLE GROUPS OF TOPICS:

- **PRINTS OF THE SAME THEME T:** *the set of prints of theme T*

LOGICAL IDM

- **Dialogue Act**

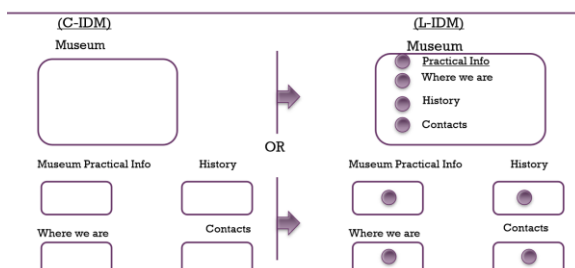
- A Dialogue act is a unit (atomic element) of content that describes a “characteristic” of a TOPIC. They result from a fragmentation process of «big» topics
- Example:
“Paintings” are fragmented in Dialogue Acts:
 - Introduction
 - Full screen image
 - Bibliography
 - Provenance
- Dialogue acts can be
 - Mandatory (default) or Optional (must be specified)
 - Single (default) or Multiple (must be specified)
- Representative Dialogue Act
 - Usually, a “fragment” (DA) is “more important”, more “representative” than others, and is mandatory, i.e. always present in all topics of a given kind. This DA is called Representative Dialogue Act and is underlined.
- Notazione:



- **Due diversi modi di passare dal Conceptual al Logical IDM**

From Topic to DAs: Fragmentation Criteria

FRAGMENTATION IS A SUBJECTIVE somehow arbitrary ACTIVITY



- **Esempi di frammentazione**

Example Issues

Multiple Topic "Print" can be fragmented:

- By size:
 - DAs "Introduction", "Further details"
- By content nature:
 - DAs "Subject" "Technical info", "Historical info", "Artistic comments"
- By user profile:
 - DAs "Description for non experts" "Description for experts"
- By media:
 - DAs "Textual + Small image description" "Full screen Image" "Animated Image".

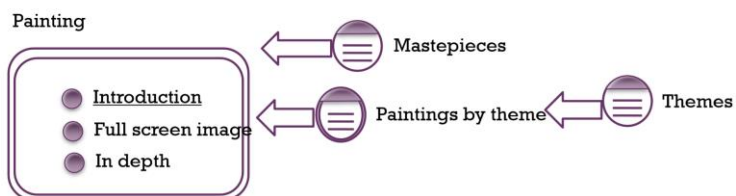
- **Introductory Dialogue Act (IDA)**

- Content is needed in (multiple) groups of topic
- A list of items (for the grouped items) – each one described by a "preview" of the group member (name, thumbnail image, ...)
- Sometimes, also a descriptive/explanatory text for the whole set of grouped items

L-idm Notation for Introductory Dialogue Acts (in Group of Topics and Multiple Groups of Topics)



■ Eg

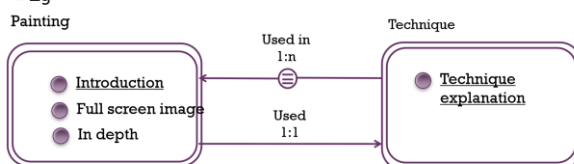


- **Relevant relationships**

L-IDM Notation for relevant relationships



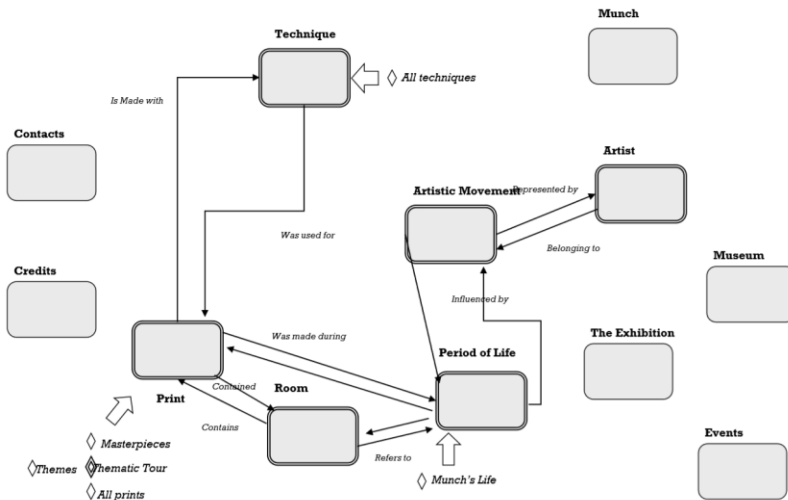
■ Eg



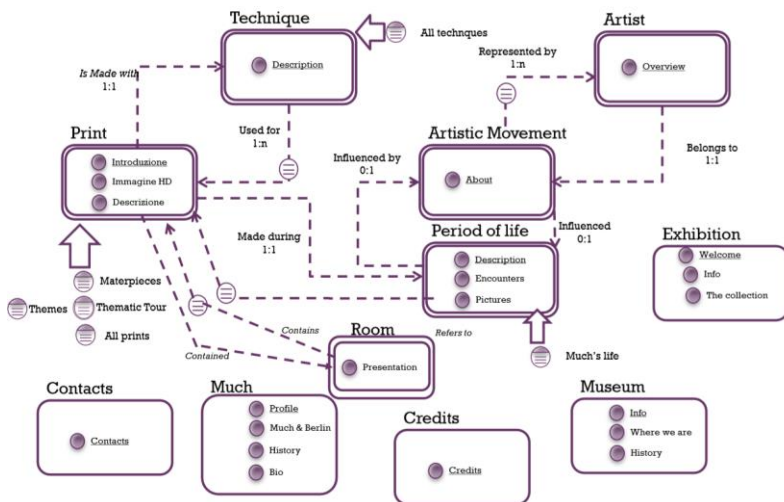
Esempio di passaggio da C a L IDM

C-IDM _schema (see C-IDM slides - cardinality missing: add it as an exercise)

Munch exhibition- C-IDM



L-IDM: Munch



PAGE IDM

- **What's inside pages?**

- Content
- Links
- Orientation info

- **Categories of pages**

- Topic Pages

The place where users consume contents about a given single topic or topic of a given kind. Derived from at least one or more content dialogue acts.

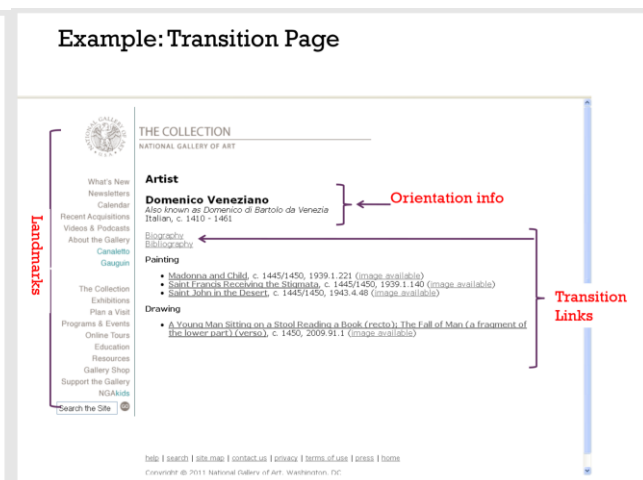
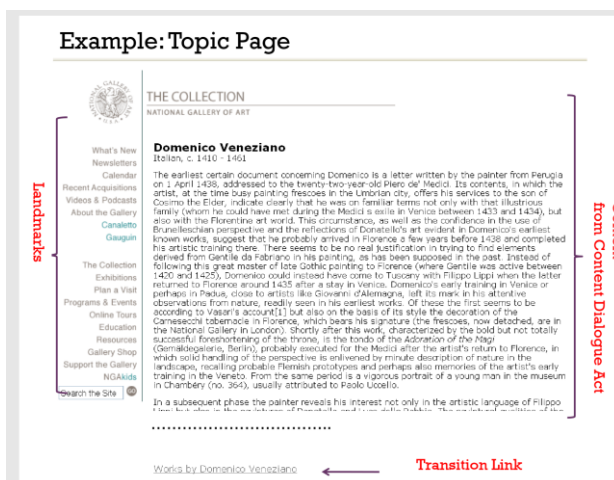
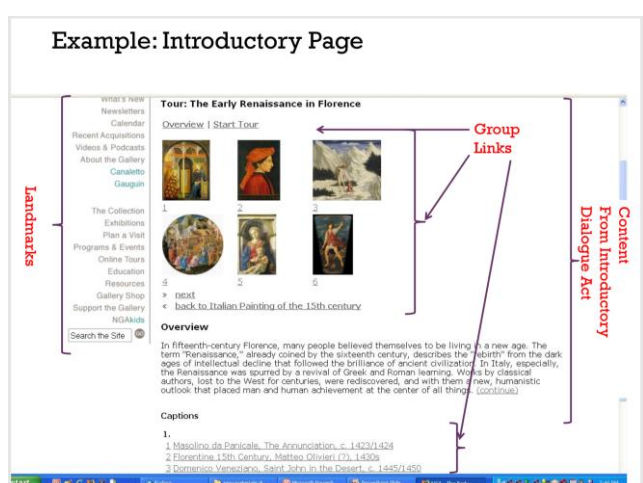
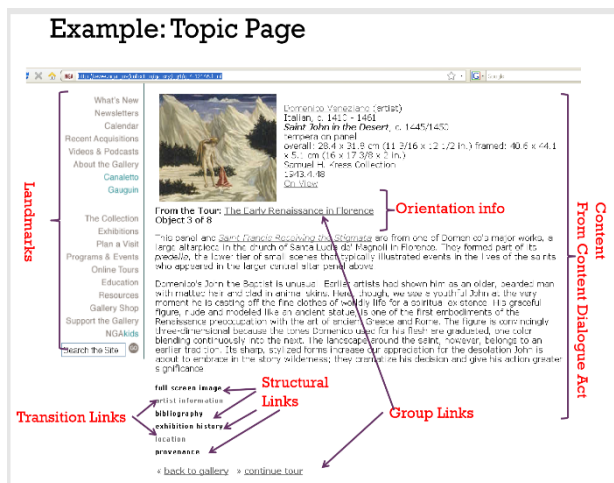
- There is a special topic pages which is the Entry Page: the page about a topic where the user arrives when he moves to that topic by effect of link traversing.

- Transition Pages

The place where users see what is related to what

- Introductory Pages

The place where users understand what a group is about, and what are its members



How are pages derived from L-IDM specifications?

MAPPING DIALOGUE ACTS INTO PAGE

“Default” mapping: 1-1 mapping from the set of Dialogue Acts to the set of pages

- 1 Content dialogue act → 1 Page
- 1 1-N relationship → 1 Page
- 1 Introductory Act → 1 Page

LINKS

- **Links are divided in**
 - Structural links
They keep the user within the same topic
 - Transition links
To move the user from a topic to a different topic
 - Group links
To support navigation across pages derived from the groups the topic belongs to
 - Static (always available)
 - Dynamic (it depends on the navigation state)
 - Landmarks
Links available in all pages.
Usually these are all the links available from the home page.

ORIENTATION INFO

The role of the orientation info is to clarify to the users the current position in the website (“Where am I?”).

NAVIGATION PATTERNS

A design pattern “... describes a problem which occurs over and over again in our environment, and then describes the core of the solution to that problem, in such a way that you can use this solution a million times over, without ever doing it the same way twice” [Alexander, 1979].

Guided tour pattern

Guided Tour

(GT)

When to adopt this pattern?

Problem: To provide “easy-to-use” access to a small group of objects, assuming the user has no reason (or is unable) to select one of them.

Solution: The solution consists of identifying an order among the group members, and creating sequential bidirectional links among them.



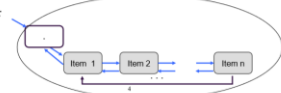
Guided Tour Pattern: variants

A GT variant is the circular guided tour, where the last member is linked to the first (or to the second, if the first is an introduction to the group).

Circular Guided Tour
(C-GT) – version 1



Circular Guided Tour
(C-GT) – version 2



All-to-all Pattern

ALL-To-ALL (A2A)



Problem: To speed up navigation in a group of objects, so that the user can jump directly from one member to another without returning to the collection entry point.

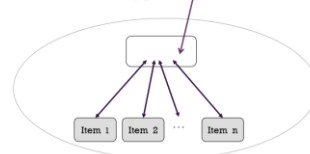
Solution: linking each member of the group to all other members of the collection.

Index Pattern

When to adopt this pattern?

Problem: To provide fast access to a group of objects for users who are interested in one or more of them and are able to make a choice.

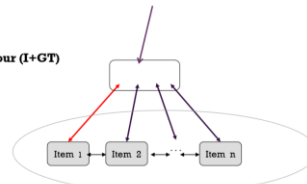
Solution: The core solution consists of defining links from the entry point of the group collection (the introductory page in IDM) to each member, and from each member to the entry point.



Index (I)

Combining Patterns: Index + Guided Tour Pattern

Index + Guided Tour (I+GT)



Patterns improve readability of documentation: by “attaching” a pattern name to a group of pages, we specify all possible navigation paths and avoid defining each link explicitly and intensionally.

LINKS INSIDE A TOPIC PAGE

- Transition link
 - For each outgoing “1-1 relation” (max cardinality = 1) there is a direct link leading to the default page for the “target” topic.
 - For each outgoing “1-N relation” (max cardinality >1) there are two possibilities
 - 1. A link leading to a “transition page”
 - 2. A “list of links” leading to all the default pages of the “target” topic (see next slide)
- Group links
 - Divided in:
 - Up:
To the introductory Page of the group the topic belongs to
 - Next-Previous:
to the default page of the next/previous member in the current group
 - They can be:
 - Static (Always available)
 - Dynamic (depending on the current group)

LINKS INSIDE AN INTRODUCTORY PAGE

- Group links
 - Divided in:
 - Down
to the default pages of the group members
 - Up
to the introductory page of the father group
 - Next/previous
to the introductory pages of the sibling groups

LINKS INSIDE A TRANSITION PAGE

- Transition links
 - To the topic pages
Which has the chosen relationship with the topic page the user is coming from
 - Return to
the topic page the user is coming from

RIASSUNTO P-IDM E FOCUS

Topic Page: Structure

- **Title**: what the page is about (from a user point of view)
- as defined in logical design
- **Content**: as defined in logical design
- **Structural Links**: (*static*) links to other dialogue acts of the same topic
- **Transition Links**: (*static*) a link for each "outgoing" relation
- **Landmarks**: (*static*) as defined from the Home Page or the section the page belongs to
- **Orientation Info** (*often dynamic*): where am I? How did I get here?
- **Group Links**: (*often dynamic*) to move within the current group

Transition Page: Structure

Transition Page = a page with a list of links corresponding to a relation

- E.G. Teacher → Course (min=1, max=10)
- **Title**: "courses taught by Franca Garzotto"
- **List of Links**: a link to each target of the relation
e.g. (for each course taught by Garzotto) "name, subtitle, starting date" →
NOTE: the "order" of the courses should be decided by the designer and made clear to the user
- **Landmarks**: as defined from the Home Page
- **Orientation Info** (*often dynamic*): where am I?

Transition Page: Design Issues

- Each link is associated to some pieces of content – to be decided during L-IDM or postponed to P-IDM
e.g. a list of Paintings Masterpieces
Painting: Name?, date?, style?, technique? Comment? Thumbnail?
- **Design issues**:
 - Issue 1: **communicability** - which pieces of information better represent the links?
 - Issue 2: **orienting the user** - are we dealing with a user who knows what is looking for or the user is just browsing around or do we want to attract the user toward specific items.....?
 - Issue 3: **ordering** - what's the best order for the links (from a user point of view)?

"Missing" Transition Links

- For optional relations (cardinality [0..1] or [0..N]) sometimes there is no link
- Three possibilities:
 - No link is shown (it can be confusing for the user)
 - A "non active" link is shown (it can be annoying for the user)
 - A "shaded" link (not active) is shown (it must convey the message that in this specific case the link is not there, but in other similar pages you may find it)

Introductory Pages: Structure

- **Title**: e.g. "OUR BEST COURSES"
- **Introductory content** (OPTIONAL): something to explain what are we talking about, to attract the user attention, to promote going "in depth"...
- **List of items**:
 - Each item
 - Some descriptive info (e.g. to the identify/characterize the course)
 - A group linkNOTE: designer should be very conscious into choosing the proper descriptive info and properly ordering the items
- + **Landmarks, Orientation Info, ("GO ON" link)**

Introductory Page: Design Issues

- "introductory" page: a way to start navigation to a group of topics
- The purpose of an Introductory Page is to present the members of the group of topics
 - 2 Possibilities:
 - Textual representation (Index): listing all the members in a given order
 - Graphic representation: e.g. an interactive map
 - A combination of both

HOME PAGE

- It is a Cover, an Index, an Introduction, a Brand communication, ...

- **Specific Content**
- **GROUP Links**

Homepage

48

The **FIRST** page has many different purposes:

- It establishes the "Brand" **a b c d**
- It offers the **index/overview** of the web site content
- It is the **invitation** ("please, come in": don't miss this opportunity")
- It is the **"appetizer"** "this is an example of what you're going to get"

Often a mix of all the above aspects

- **Example**:

Homepage

49

- When to design the "home-page"?
- Interaction Designers: At the starting of the design process
 - +setting the brand and the graphic style
 - many things (almost everything) are still unknown
- Information Engineers: At the end of the design process
 - +the rest of the site is clear and the homepage may carefully reflect it

