# P-IDM Design-part 1

General concepts

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# + Page design in IDM:Designer's issues

Some designer's issues addressed during the presentation design phase:

- What the interface of the "dialogue" system will be, at conceptual level?
  - Where (in which pages) can the user "ask" the application for information?
  - Where (in which pages) will the required content be displayed?
  - What should be placed in the pages?
- Where does the dialogue start from?
- Where to place opportunities for navigation "jumps"?
- ….

# + IDM Page design: Goal

Starting from L-IDM specs, P-design goal is to define at abstract (conceptual) level:

- The complete "navigation architecture" (pages & links)
- The overal "map" of the application
- The information and navigation structure of each page

- Warning! Graphics and look&feel is NOT part of presentation design as intended by IDM
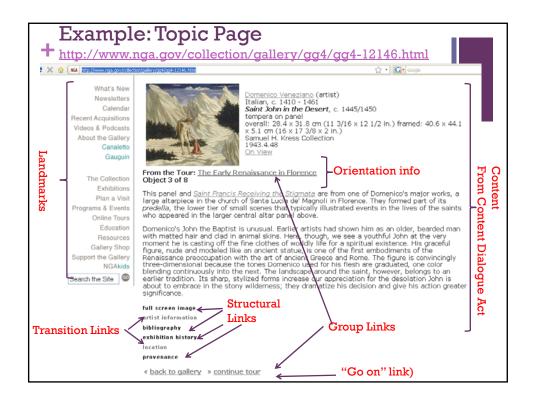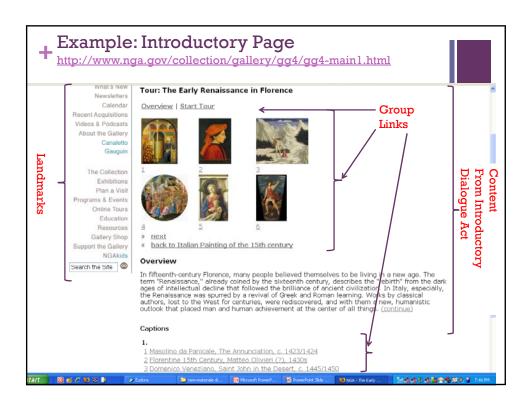
# + P-IDM primitives
- PAGE
  - Topic Page
  - Entry Page or Default Page
  - Transition Page
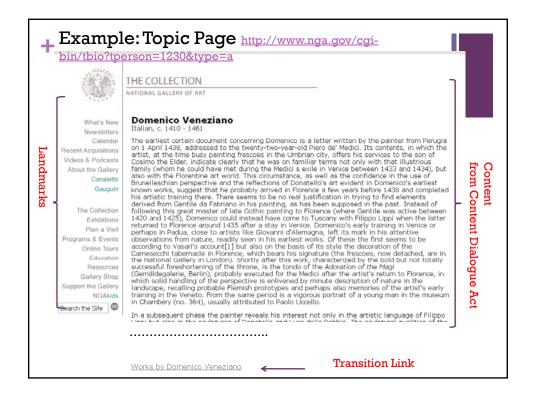  - Introductory page
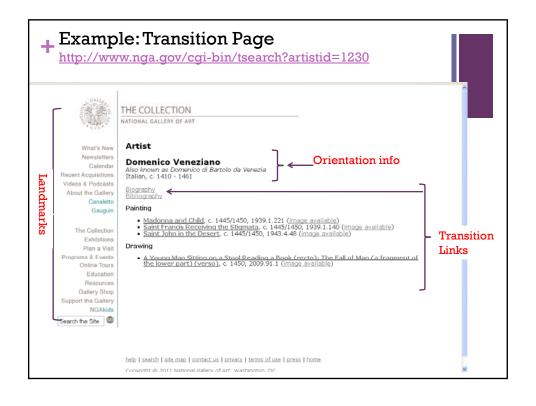  - Home page
- LINK
  - Structural link
  - Transition (or semantic) link
  - Group Link
  - Go on Link
  - Landmark
- NAVIGATION PATTERN
- ORIENTATION INFO

## Example: Topic Page

http://www.nga.gov/collection/gallery/gg4/gg4-12146.html



**Landmarks**

**Content From Content Dialogue Act**

Orientation info

**Transition Links**

**Structural Links**

**Group Links**

"Go on" link)

## Example: Introductory Page

http://www.nga.gov/collection/gallery/gg4/gg4-main1.html



**Landmarks**

**Group Links**

**Content From Introductory Dialogue Act**

## Example: Topic Page http://www.nga.gov/cgi-bin/tbio?tperson=1230&type=a



Landmarks

Content from Content Dialogue Act

Transition Link

## Example: Transition Page
http://www.nga.gov/cgi-bin/tsearch?artistid=1230



Landmarks

Orientation info

Transition Links

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# P-IDM primitives:PAGE

PAGE:

- atomic **presentation unit**

- visual container of **CONTENT** (text, images, animation, video, audio) AND **LINKS**

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# How are pages derived from L-IDM specifications?

CONTENT: 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 Transition act → 1 Page
- 1 Introductory Act → 1 Page

Examples: see previous slides; See also…

# + Observation

Using the default rules:

if N is the set of Dialogue Acts defined in the L-IDM schema, the Pages defined in the P-IDM schema are N+1 (the HOME page)

BUT

sometimes there are also other as pages (see next slides) e.g,, **high** level groups, "section pages", "operational pages" - not envisioned in L-IDM, which may become needed during P-IDM design and are added

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# + More sophisticated content mapping

- N Content dialogue acts for the **same** topic →1 Page
  - See Example

- Transition Act → NO separate Page: TA EMBEDDDED in one or more Topic pages; in this case:

Content Dialogue Act + Transition act →1 Page
  - the page must correspond to a Topic connected with the transition act in L-IDM
  - See Example

# + More sophisticated content mapping

- Multiple Introductory Acts →1 Page
    - Example 1: Introductory Act for a Father Group + N Introductory Act for the Son Groups →1 Page
        - See example
    - Example 2: 1 "Introductory Act for an "Important" Group + Other "related" Introductory Acts →1 Page
        - See example

In some cases, multiple parametric groups are merged in a single page listing all parameters and are dynamically displayed when a user selects a parameter
- See example

# + More sophisticated content mappings

- One act=> multiple pages

- to avoid! plan organization in advance - in L-IDM - as much as possible!

- See example

## + Mappings can be dynamic…



Warning! Usability…?

## + 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

- **Transition Page**
  - The place where users understand what is related to what, and decide to go on
  - Derived from a transition act

- **Introductory page**
  - The place where users understand what are a group is about, and what are its members, and decide to go on
  - Derived from introductory act(s)

# + DEFAULT page (or Entry Point) of a Topic

- A "special" Topic Page

- **The** page about a topic where the user arrives when (s)he moves to that topic by effect of link traversing

- **The** default destination of any link to that topic

Observation:

- Usually, for each topic there is one default page only. In sophisticated designs, default pages may depend from the navigation context (e.g., the default page for T is X when the user arrives from N and is Y when (s)he arrives from M, or when the topic has been already visited before

- Dynamic entry pages are difficult to implement and may create usability problems

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# + What is inside pages? CONTENT

- **"Static"** Content: from the corresponding content dialogue acts

- **"Dynamic"** Content: **Orientation Info**
  - The role is to clarify to the users the current position in the website "Where am I?" How did I get here?"
  - Depends on the navigation context (the pages traversed so far)
  - In simple cases "bread crumbs" work; in general cases they do not work
  - Orientation info require advanced implementation skills and must be carefully designed to avoid usability problems

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# What is inside pages? LINKS

TOPIC PAGE

## Structural Link + Semantic Links + Group Links + Landmarks + Go-on Link

- **Structural Links:** to the pages of other acts of the same topic

- They keep the user within the same topic (same "cognitive space")

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# What is inside pages? LINKS
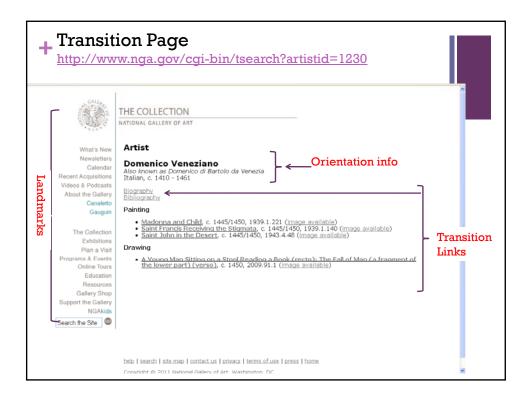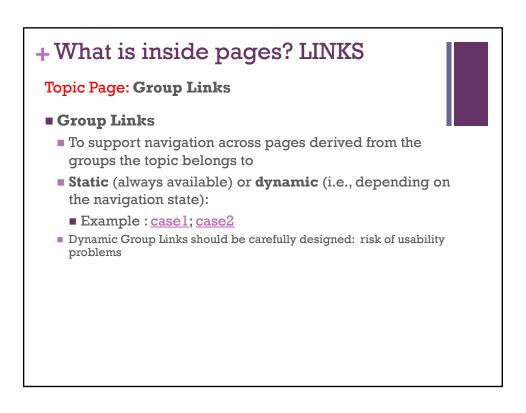
TOPIC PAGE: **Semantic Links**

**Semantic (Transition Links): move the user to a DIFFERENT topic ("cognitive jump")**

- For each outgoing "1-1 relation" (max cardinality = 1)
    - a direct link leading to the **default page** for the "target" topic

- For each outgoing "1-N relation" (max cardinality >1)
  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)
        - NB: in the second case the transition act is embedded in the topic page - See Example

# + Transition Page
http://www.nga.gov/cgi-bin/tsearch?artistid=1230



# + What is inside pages? LINKS

**Topic Page: Group Links**

- **Group Links**
  - To support navigation across pages derived from the groups the topic belongs to
  - **Static** (always available) or **dynamic** (i.e., depending on the navigation state):
    - Example : case1; case2
  - Dynamic Group Links should be carefully designed: risk of usability problems

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# LANDMARKS

Landmarks=links available in all pages

- General rule: all (or some of) the links available from the Home Page

- Small-Medium applications : landmarks are the same everywhere

- Some (very) large applications : few landmarks on every page and additional "section landmarks", different for each section

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# *"GO ON" link*

- It allows the user to "continue" the navigation
- Typically, go-on links are group links
- Simple solutions
  - "go up" to the **current** index
  - "go to the next item" of the **current** tour
  - .....
- Go-on Links should be carefully designed: risk of usability problems

**+ What is inside pages? LINKS**

Transition Page: Transition Links + Landmarks (+ Go-on Links)

Remember:

- A Transition Page corresponds to a Transition act for a 1-N relevant relationship

- The Transition Act "connects" a "Source" Topic to a set "Destination" Topics

A Transition Page contains

- All transition links that lead to the default pages of the destination topics

- One transition link to "return to" the default page of the "source" topic

**+ What is inside pages? LINKS**

Introductory Page: Group Links + Landmarks (+ Go-on link)

GROUP LINKS:

1) "DOWN": To the default pages of the group members:
   - To ALL group members
   - or/and to the **first** group member

2) "UP": To the page of the Introductory Act of the Father group

In case of introductory pages for high level groups containing instances of parametric groups: down group links are the selection parameters ("parameter page")

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## Design Issues and refocusing some concepts

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## Topic Page: Structure

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- **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** : links to other dialogue acts of the same topic

- **Transition Links**: a link for each "outgoing" relation

- **Landmarks**: as defined from the Home Page or the section the page belongs to

- **Orientation Info** *(often dynamic)*: where are we?

- *Group Links:* **to move within the current group**

- *"GO ON"* *(dynamic):* How can I continue what I am doing?

# + 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?
  - *["GO ON" (dynamic):* How can I continue what I am doing?]

# + 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 link
  NOTE: designer should be very conscious into choosing the proper decsriptive info and properly ordering the items

**+ Landmarks,** *Orientation Info, ("GO ON" link)*

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# 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

Example1
Example2

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# Tools for Introductory Pages

Optional tools can be used "associated" to an introductory page

- *User Controlled Ordering* : letting users to control the ordering of the list of items (suggested for long lists of items)
- *User Controlled Filtering:* letting users to search within the list of items and/or filter their visualization according to some selection criteria (suggested for very long lists of items)

- Example-1
- Example-2

# + "Nested" Introductory Pages

Derived from Multiple Group of Topics
  e.g. Paintings by <u>Subject</u> (portrait, religion, countryside, ..)

Typical structure

- **Parameter Introductory Page**
  - Title (e.g. "Paintings by subject") + List of items = parameter values
    - Portrait →(link)
    - Religion →(link)
    - ..
  - + Landmarks, *Orientation Info, ("GO ON" )*
- **[Parametrized Introductory Page**
- Title (e.g. "Portait Paintings") + List of items : corresponding to the parameter choice
    - Portrait-1 →(link)
    - Portrait-2 →(link)
    - ……
  - + Landmarks, *Orientation Info, ("GO ON" )*

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# + "Other" Pages

Pages not corresponding to L-IDM acts

- Home Page
- Area (Section) page
- Form (input) Page
- Search Page
- Service Page
- ….

All of them do not originate from IDM design

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# HOME PAGE

- It is a Cover, an Index, an Introduction, a Brand communication, …
  - (see slides "Information Architecture")

- **Specific Content**

- **Links** (the basis for landmarks):

  - Links to Topic pages from single topics

  - Links to introductory pages

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# SPECIALIZED PAGES

- Example: Pages for input ("Forms"), Search, Transaction, ……

- **Each category has different requirements and/or operational needs**

- **IDM does not consider all for them**

**+** END P-IDM part 1