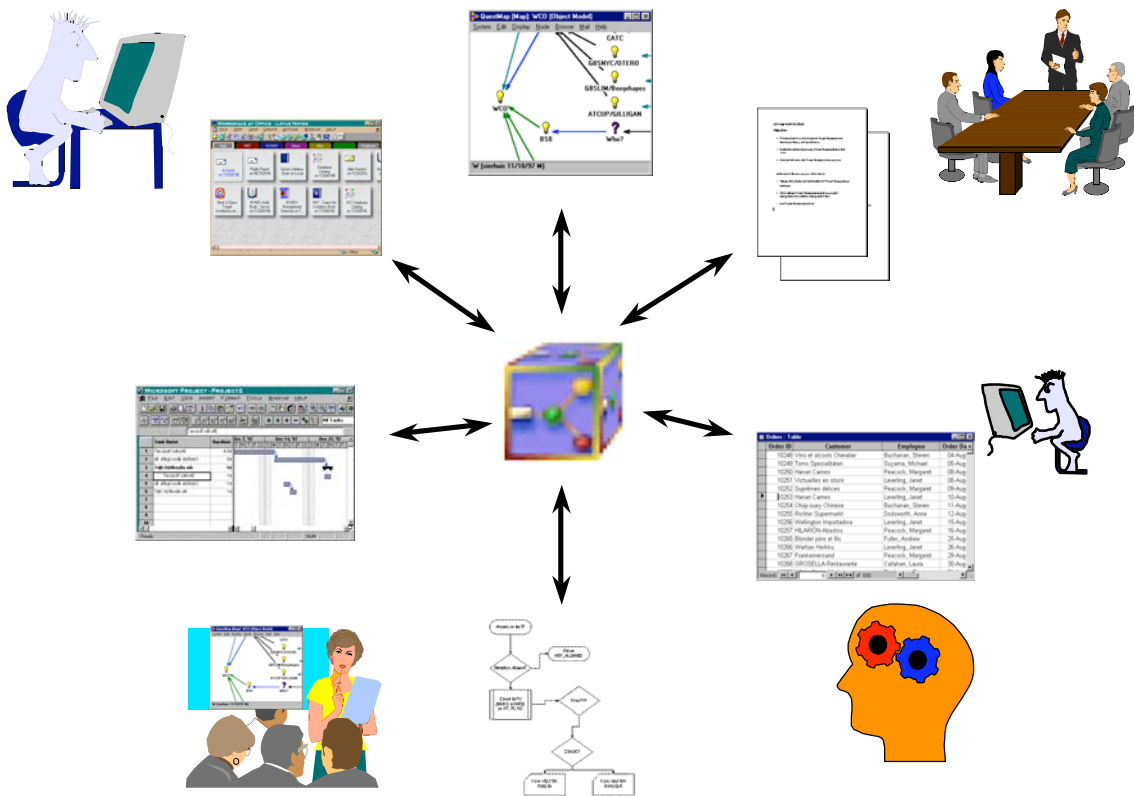


# Introduction to Compendium

## Tutorial



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# 1 Course Introduction

*Welcome to the course! This is a 2-3 hour taster to get you up and running with the Compendium approach and software tool. After today you'll be able to start 'playing' with Compendium aware of its capabilities and how it might support your work, and hopefully finding it useful before long.*

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## Objectives

- Provide a hands-on introduction to Compendium techniques, theory, and applications
- Enable you to begin using Compendium in your work
- Acquaint you with Compendium resources

**At the end of today, you will know how to:**

- Create visual concept maps to help analyze problems (as an individual or in a discussion)
- Search Compendium to retrieve information
- Bring material in other applications into Compendium, and publish Compendium maps to the Web

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## Outline of Topics

- Overview of Compendium
- Basics of the software
- Hypertext principles
- Compendium techniques
- Applications and how to get started

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## **2 Compendium Overview**

This unit presents an overview of Compendium's purpose, the problems it helps solve, applications, and benefits.

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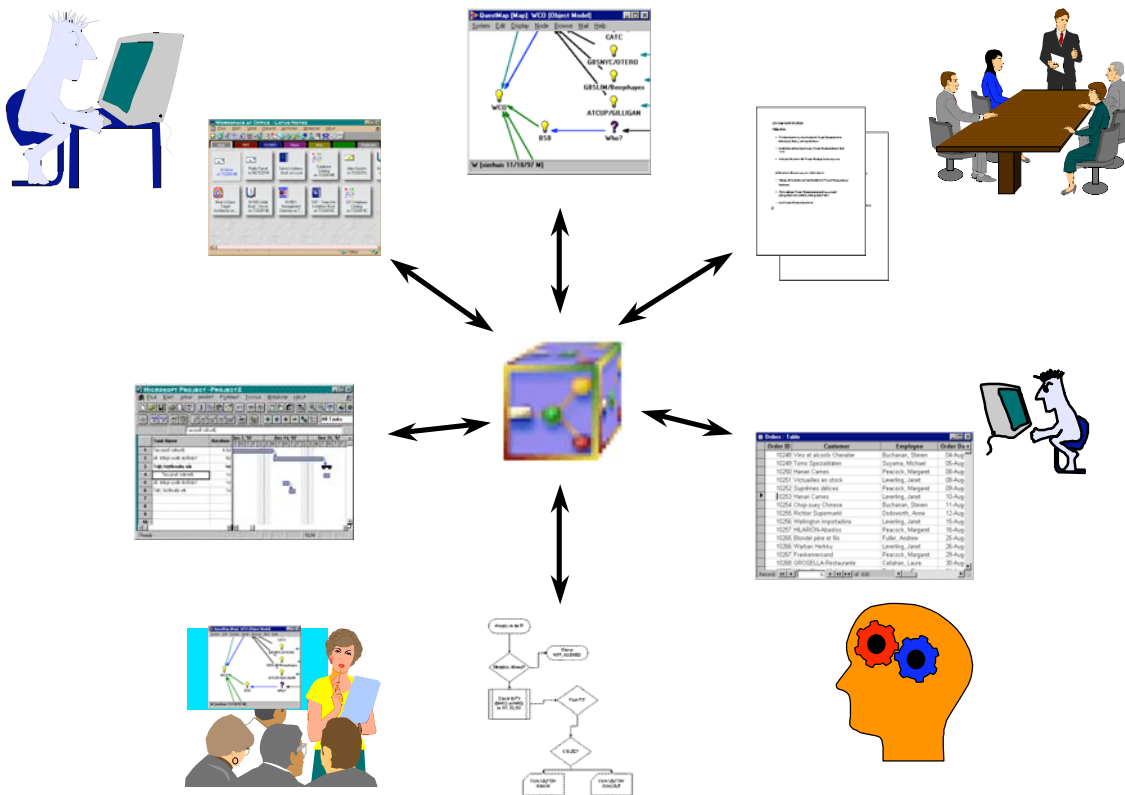
## What is a “Compendium”?

From the *Random House Dictionary of the English Language (Unabridged)*:

1. A brief treatment or account of a subject, especially an extensive subject;
2. A summary, epitome, or abridgement;
3. A full list or inventory.

## What is “Compendium”?

Compendium is about sharing ideas, creating artifacts, making things together, and breaking down the boundaries between dialogue, artifact, knowledge, and data. It helps provide a faster, better way for groups and project teams to work.



Compendium provides a set of templates, methods, and tools that connect people and ideas.

Compendium gives you control over knowledge elements and lets you use them in multiple ways – in meetings, in documents, working alone, working at a distance.



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## 3 Preparation



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### Exercise 1

Creating a new Project.

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## 4 Compendium Software Basics

This unit presents an introduction to Compendium node types, hyperlinking approaches, searching, import/export, and other software mechanisms.

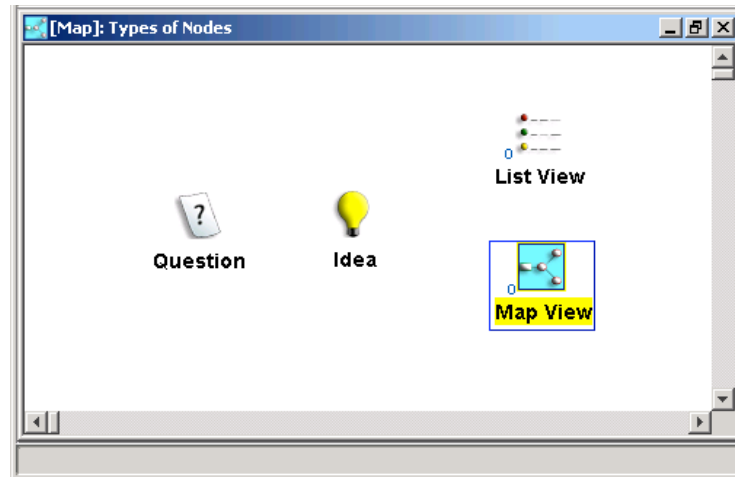
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## Nodes, Links and Views

Ideas are expressed as icons (or *nodes*). They can be moved around, and connected to other ideas via *links*.

Nodes are contained in *Views*. Views can contain other Views. There are two kinds of View: a *Map* in which nodes can be placed anywhere in a 2D space, and a *List* which organizes nodes in a sortable column.

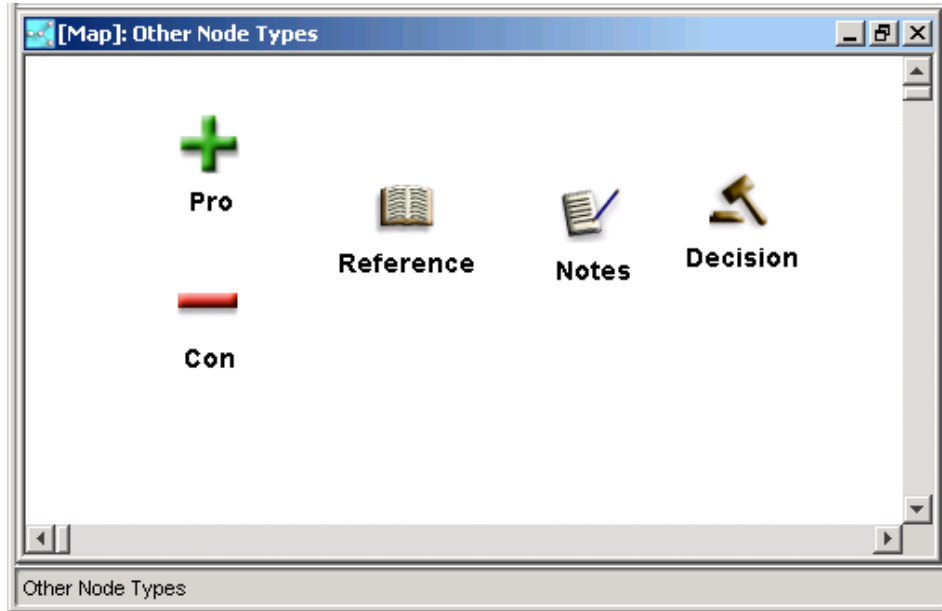
## Basic Node Types



All nodes can be created by dragging from the node dock, choosing from the right-click menu, or by a keyboard shortcut ('power users' tend to use the latter)

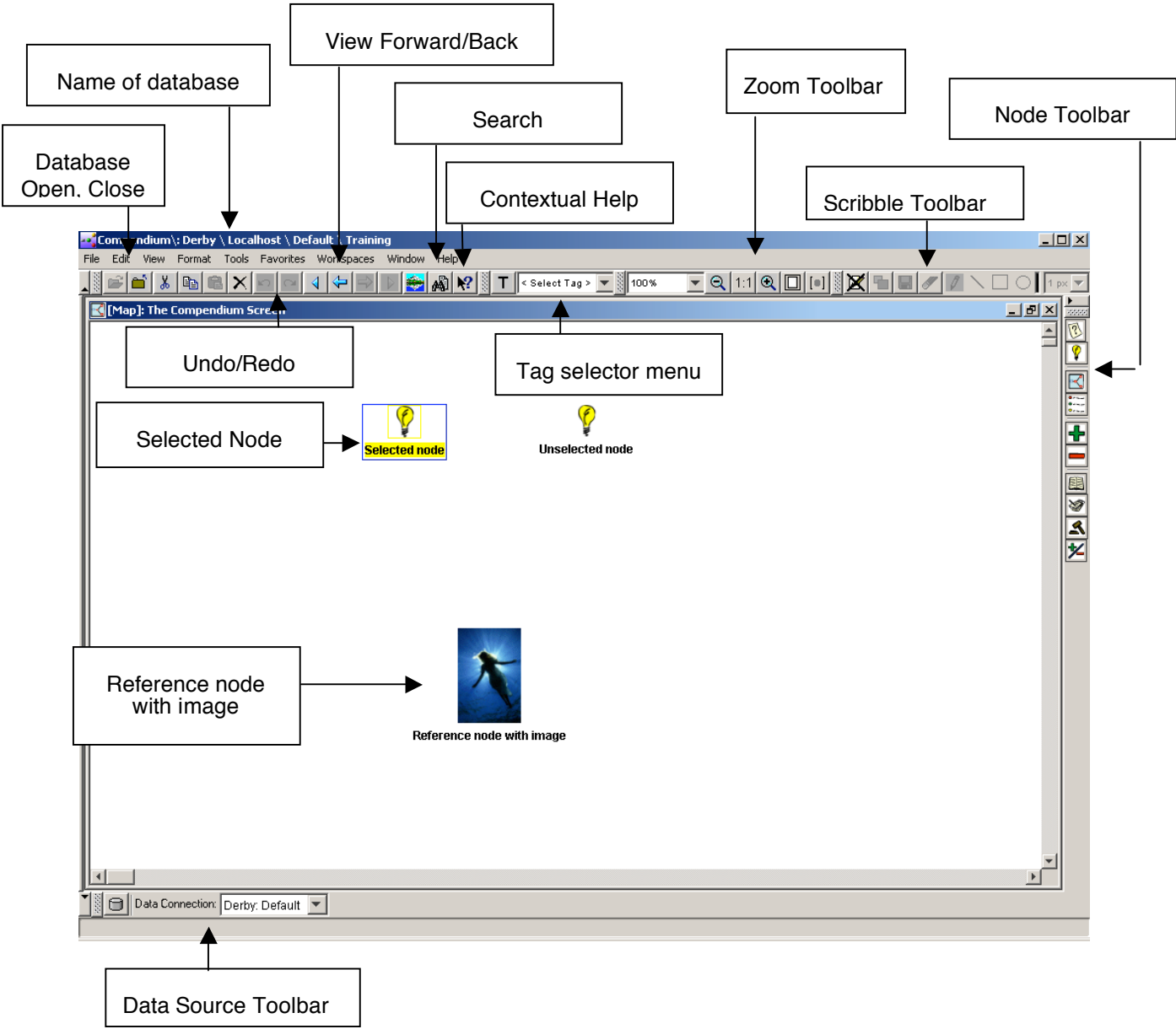
Node Type	When to Use	Keyboard Shortcuts
Question	To ask a question or raise an issue in your subject matter domain	Q, ?
Idea	To provide a possible answer or alternative to a question	A, !
List View	To create a sortable list of nodes To place the results of a search (e.g. to create a Catalogue of items) To create a collection of nodes that don't need to be linked with each other (associative links)	L
Map View	To create a "picture" of the relationships between ideas To group questions and ideas together in meaningful clusters To create associative links between nodes	M

## Other Node Types



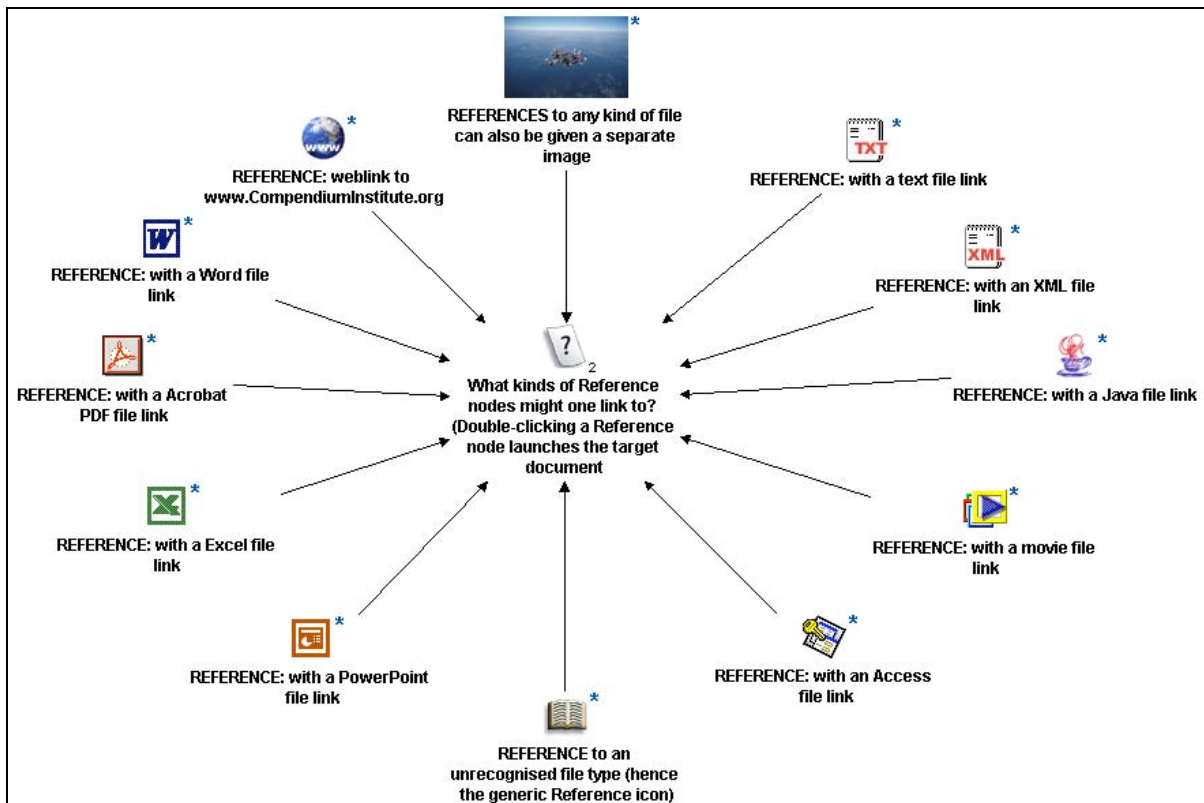
Node Type	When to Use	Keyboard Shortcuts
Pro	To support an idea	+
Con	To argue against an idea	-
Reference	To bring in a link to an external file (such as a spreadsheet, picture, or document)	R  (or drag and drop the file directly onto the map)
Note	To provide extra or useful information about another node or the current view	N
Decision	To resolve a question - link it to an Idea, or right-click on the Idea to change it directly to a Decision node	D

# The Compendium screen



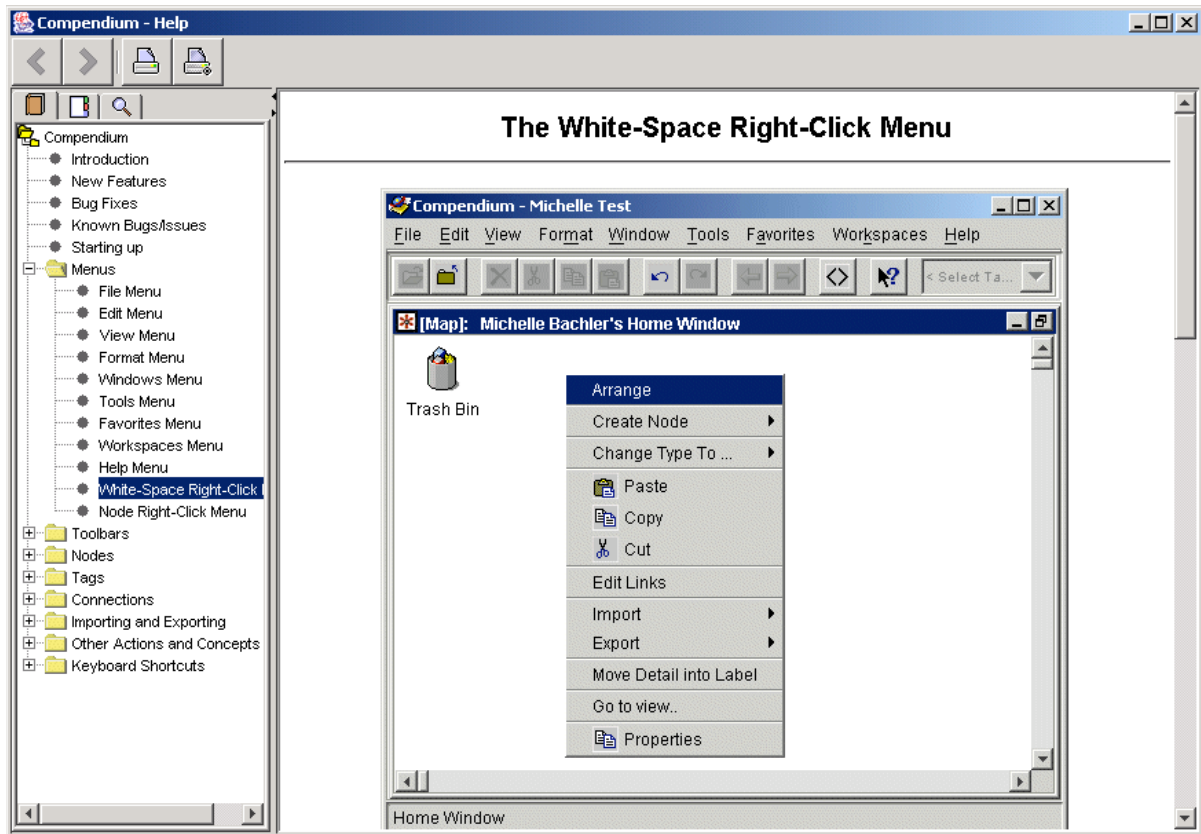
## Reference Nodes

Reference nodes are the way to link in documents and websites. You can simply drag and drop a file from anywhere in Windows into a Map or List. If it is a common file type that Compendium recognizes, then it will give it the right icon automatically. See the Reference nodes in the map below to see these types:



You can also create a Reference node by hitting the R key or dragging and dropping it from the Node Toolbar, and then specifying the file or URL manually.

## Online Help



Compendium has an extensive on-line help system. It contains explanations of all the menu items and other features of the tool.





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## Exercise 2: Creating Nodes

Complete Exercise 2: Creating Nodes in *Exercises for Introduction to Compendium Techniques*.

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## 5 Compendium Hypertext Principles

As we said at the start, this introduction to Compendium is as much about learning to think in terms of relationships between ideas, as it is about using this software tool.

This unit provides an introduction to *hypertext*, hyperlinking, and how you can make use of these in Compendium.

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## What is “hypertext”?

Hypertext is the art, design, engineering, and science of relationships.

“Hypertext is an information management concept that organizes data into content objects called nodes, containing text, graphics, binary data, or possibly audio and video, that are connected by links which establish *relationships* between nodes or sub-parts of nodes. The resulting directed graph ... forms a semantic network-like structure that can capture rich data organization concepts while at the same time providing intuitive user interaction via navigational browsing.” - W. Noll, J. Scacchi.

The World Wide Web is a very simple hypertext system (which is why it spread so quickly) but it does not provide good support for managing complex webs of information. Compendium helps you make and navigate connections in several ways.

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## **Types of Relationships in Compendium**

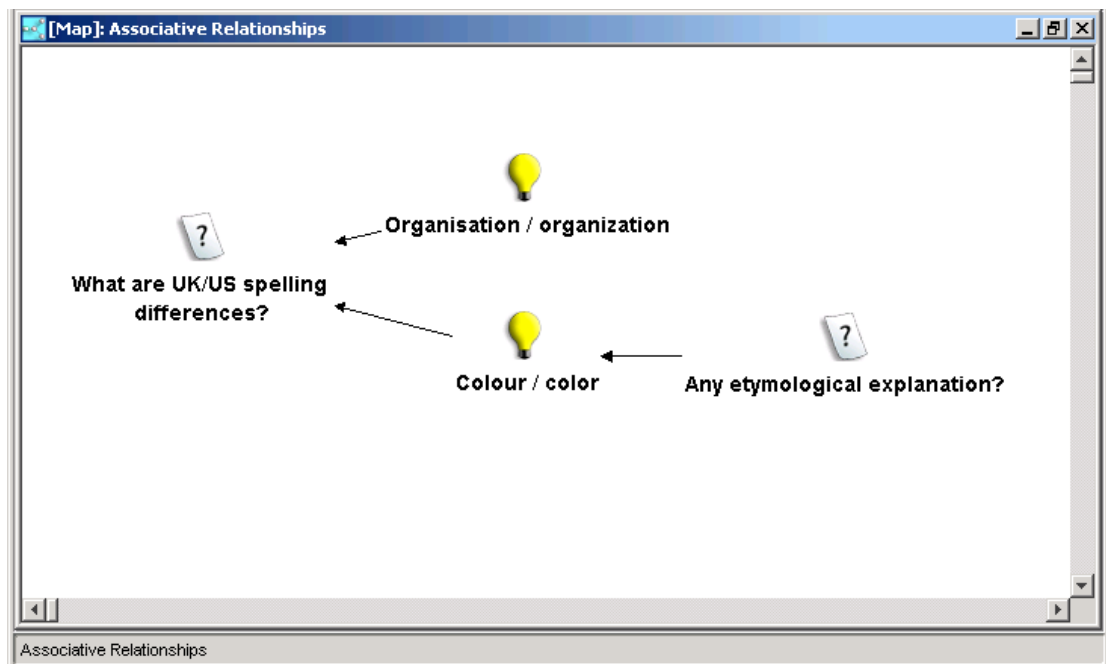
**Associative:** Link between ideas in the same context

**Transclusive:** Link between the same idea in different contexts

**Categorical:** Link between ideas because they are in the same category.

## Associative Relationships

Associative relationships mean creating a graphical connection between two nodes in a Map.



You create associative relationships to show connections between two or more ideas. Just draw the links between them and they display as physically connected.

You've already created associative links in Exercise 2.

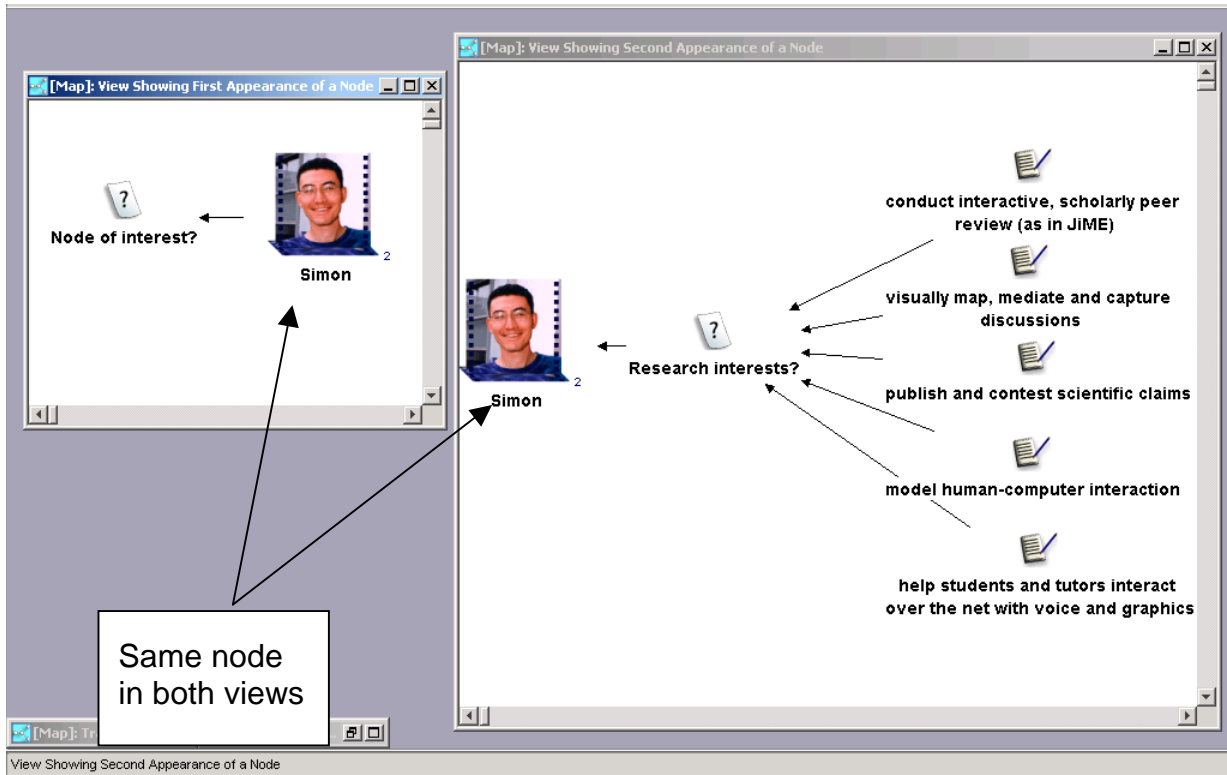
## Translusive Relationships

A "translusive link" is "a link between two items that are the same" - *Ted Nelson*.

You create translusive relationships to show the same idea in *multiple contexts* (i.e. in *different Maps or Lists*).

Over the life of a project, the same idea that originated in an email from a client to a project leader might resurface as part of someone's action item list, as an agenda item for a meeting, as part of an analysis session, or as part of a formal requirements document. In each case, the idea is associated with different ideas, but the same idea appears in all the different cases.

It can be tracked in Compendium by *reusing* the same node for a given idea in multiple maps/lists. Editing a node in one view (e.g. its label, detail, tags, or its icon) instantly updates in all other views where it has been transluded.



This powerful mechanism is explained further next.

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## Transclusive Relationships Show All the Appearances of the Same Node

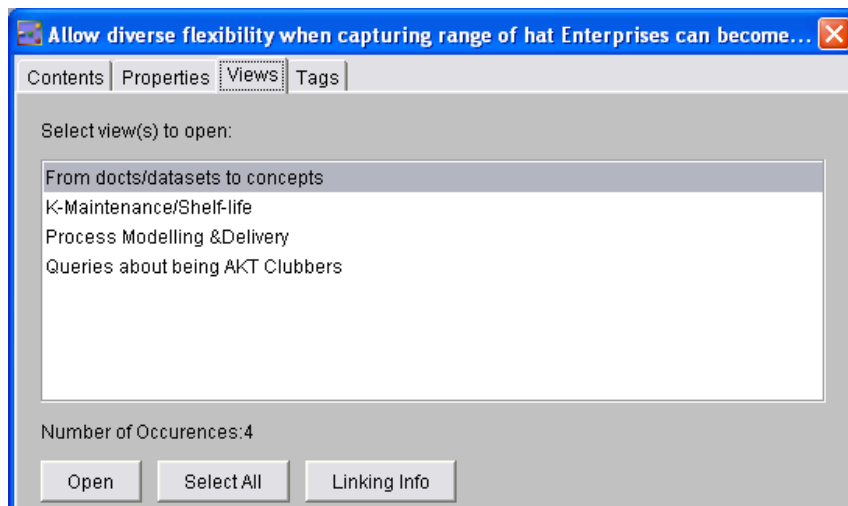
Transclusive hyperlinking gives you the means to track an idea in all its appearances.

If you have **Transclusion Indicator** checked on (under the View menu), then a number appears in the lower right corner of the icon to show in how many contexts that idea has come up (e.g. 4):



**Allow diverse flexibility when capturing range of hat Enterprises can become proactive in the identification of potential obsolescence before it becomes a reality.**

You can right-click on a node and select **Views** to display the maps or lists in which that idea appears –the node above is in 4 different views.





## Categorical Relationships (Keyword Tags)

Categorical relationships connect ideas that have been similarly classified. In Compendium, you classify an idea by giving it a “tag” (keyword).

Examples of tags you might use in a university context include *Action Item, Unit 3, AL, Academic, Dependent on Post Office Case Study, 2005 Presentation...*

You can invent tags to mark anything that you may want to search for (Tags can be arbitrarily combined when Searching, e.g. all *Action Items* for *ALs* in connection with the *2005 Presentation*).

So, Tags give you a third way to express connections between ideas, because they have something in common.

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## Summary: The 3 Kinds of Relationship

Type of Relationship	When to Use	How to Create
Associative	To show connections between two or more ideas in the same context (Map)	Right-drag from a node (or group of nodes) to the node you want to connect to
Transclusive	To show the same idea in multiple contexts (Maps/Lists)	Copy and paste a node from one view (map or list) to another  (note to make an independent copy of a node that is no longer connected to the original, use right-click <i>Clone</i> )
Categorical	When you want to classify an idea, thus connecting it to all other ideas that share that characteristic	Select a Tag from the Tags toolbar menu (see the exercise on how to create Tags)



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## Exercise 3: Hyperlinking

Complete Exercise 3: Hyperlinking in *Exercises for Introduction to Compendium Techniques*.

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## 6 Compendium Techniques

This unit introduces you to three basic Compendium techniques for managing information and ideas:

1. Tagging
2. Searching
3. Catalogues

## Node Tagging

Adding tags to nodes enables searches, cross-references, and the on-the-fly creation of specialized maps and lists without the manual work of assembling them node-by-node.

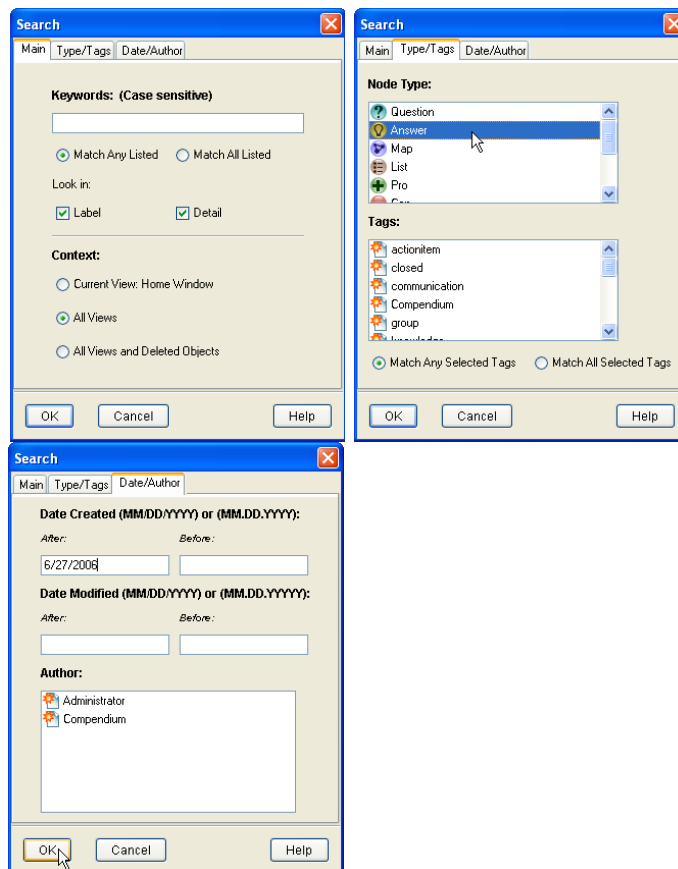
To aid in the coding process, *Groups* of tags can be created and maintained to support different tasks. New tags can be defined on-the-fly.

## Searching

Searching is an automated way of finding ideas in your database.

Compendium will look through all of the maps and lists and find each node that matches your search criteria. Search criteria can be by keyword, by author, by type of node, by creation or modification date, etc.

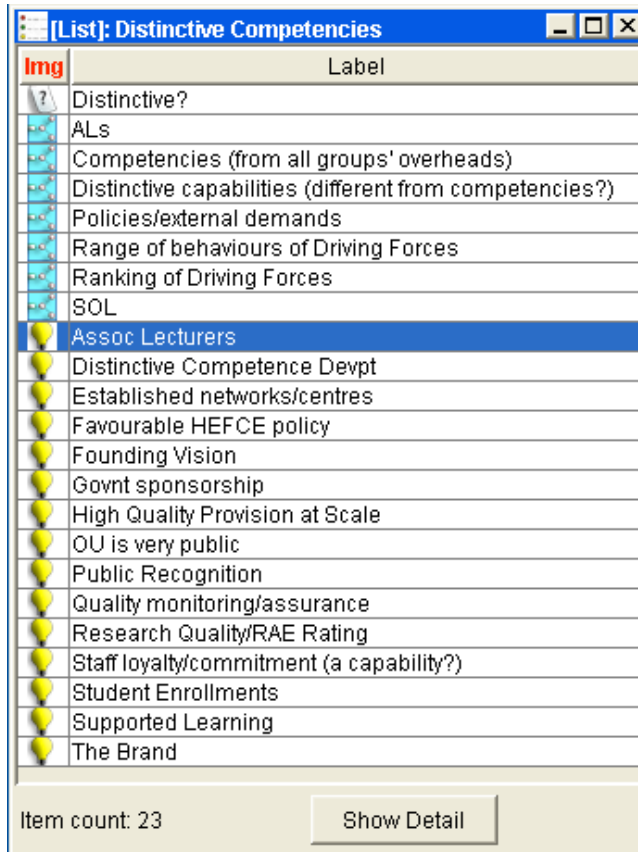
One of the most powerful uses of Search is to build catalogues of nodes that share common Tags (covered shortly)



## Catalogs (Lists)

Catalogs are collections of nodes in the same category (or categories). A catalog is typically produced by Searching a database for nodes with one or more Tags, and inserting the results into a List (that can then be sorted by author, date, etc). Individual nodes can of course be pasted in manually.

For example, a university might want to maintain catalogs of *Faculties*, *Courses*, *Regions*, *Media types*, and *Staff*. Below is a catalog of *Distinctive Competencies* gathered in a scenario building process.



Recall that because these nodes are transcluded, you can now right-click on any node to see where else it is used - i.e. in what context it arose.



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## Exercise 4: Adding 'Tags' to Nodes

Complete Exercise 4: Adding 'Tags' to Nodes in *Exercises for Introduction to Compendium Techniques*.



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## Labeling Nodes

Taking the time (in the moment or later) to make sure that nodes are labeled with upper and lower case, spelled correctly, and following labeling conventions ensures that all users will be able to navigate in the database, find items of interest, and that generated documents will be formatted correctly.

Node labels should also contain just enough information to communicate their meaning succinctly; detail belongs in the Detail.

Good:

“Budget Manager”

“What are good tools for sales reps?”

“Please research these open issues”

Bad:

“budget manager”

“What tools?” or “What?”









“Here is a list of open issues. 1. Where is my lunch. 2. Why haven’t you finished that...”

## Labeling Views (i.e. Maps and Lists)

Since you will be navigating in Compendium in a similar way in which you navigate the Web, having good view labels is a lot like having good titles for web pages. They help tell you where you are and what you're looking at.

View labeling is especially important, since nodes can be located in multiple views, and when you display the list of those views, it really helps if you can infer from their names what they contain!

One helpful convention is to give View node labels suffixes that show what type of view it is. For example, you could append the word *[Activity]* to the label of every map containing a Activity Model, giving a helpful list of views such as the following.

Img	Label
	Communicate performance case determination back to Booster and FDO [Activity]
	Communicating over flight loop [Activity]
	Communicating with main engine operator about what's happened and how it affects our system [Activity]
	Computation and monitoring of helium pressure, is it adequate for engine shutdown [Activity]
	Give recommendations to Flight [Activity]
	Give updates on engine performance (Booster view) [Activity]
	Manually verifying the performance parameters [Activity]
	Monitor Crew [Activity]

## Templates

Templates are a way to facilitate the creation of maps that follow a known, structured format.

Templates typically consist of a set of questions driven by the process you want to follow. These questions can be exported as templates and imported into new maps.

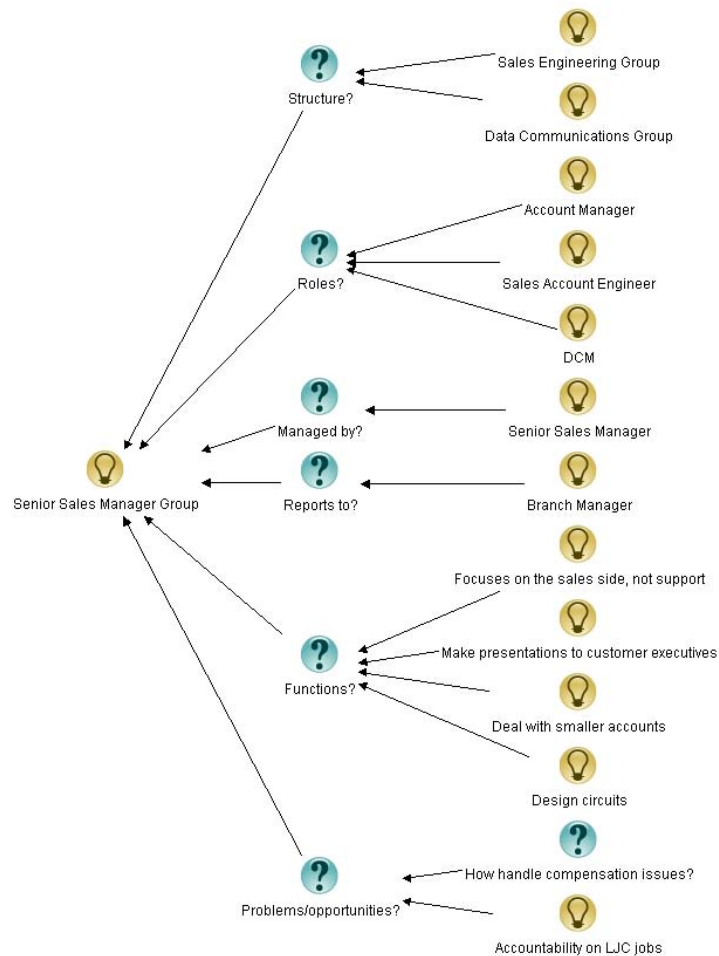
For instance, within a university there are numerous situations where, at a given point in a process (e.g. *Course Design*), certain issues need to be discussed and decided on by certain people (e.g. in order to complete a certain form). This is a prime candidate for a template, or a series of templates that scaffolds the team's decision-making process.

*Any standard process or methodology* can be translated into intuitive Question templates to focus analysis and decision-making. The structured maps that result can then be used to generate documentation, or pass data to another system.

## Template example 1: modeling organizational structure

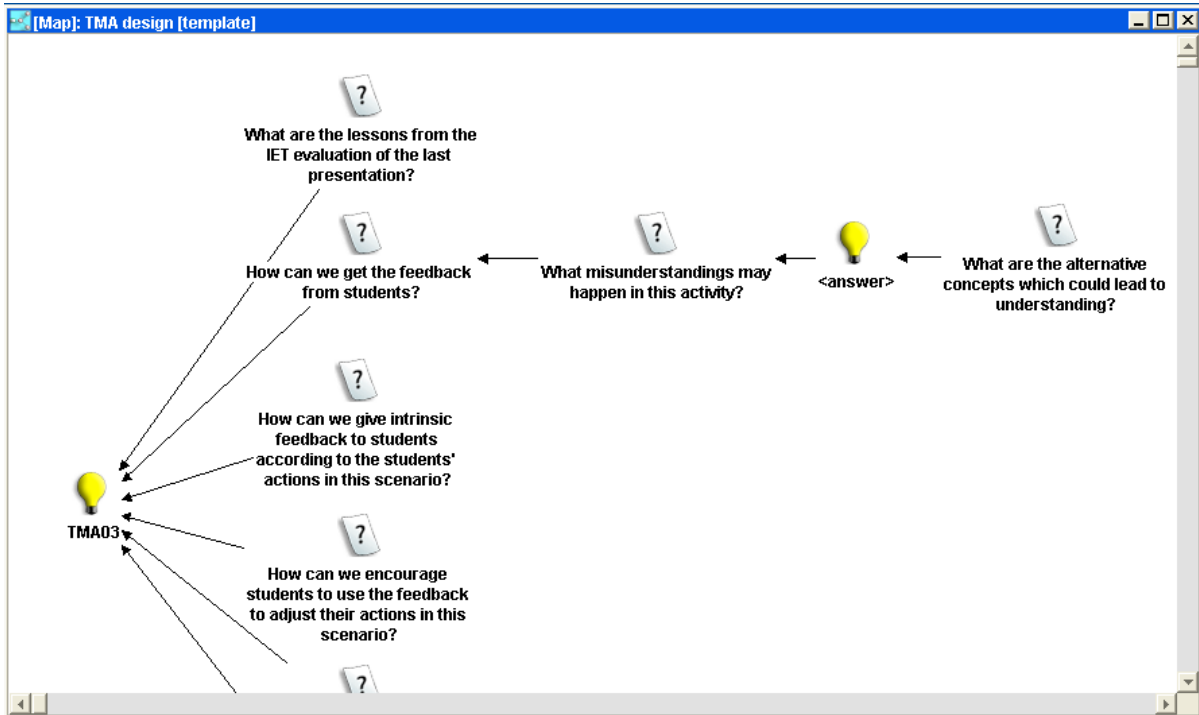
Below is an example of a template for building an Organizational Model

You use this to generate a conventional looking 'report' from Compendium.



## Template example 2: Evaluation design

Below is a template for a university evaluation design, where the Questions are driven both by the institution's processes (e.g. evaluations of presentations) and a particular instructional design framework.





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## Exercise 5: Creating a Template

Complete Exercise 5: Creating a Template in *Exercises for Introduction to Compendium Techniques*.

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## 7 Publishing Maps on the Web

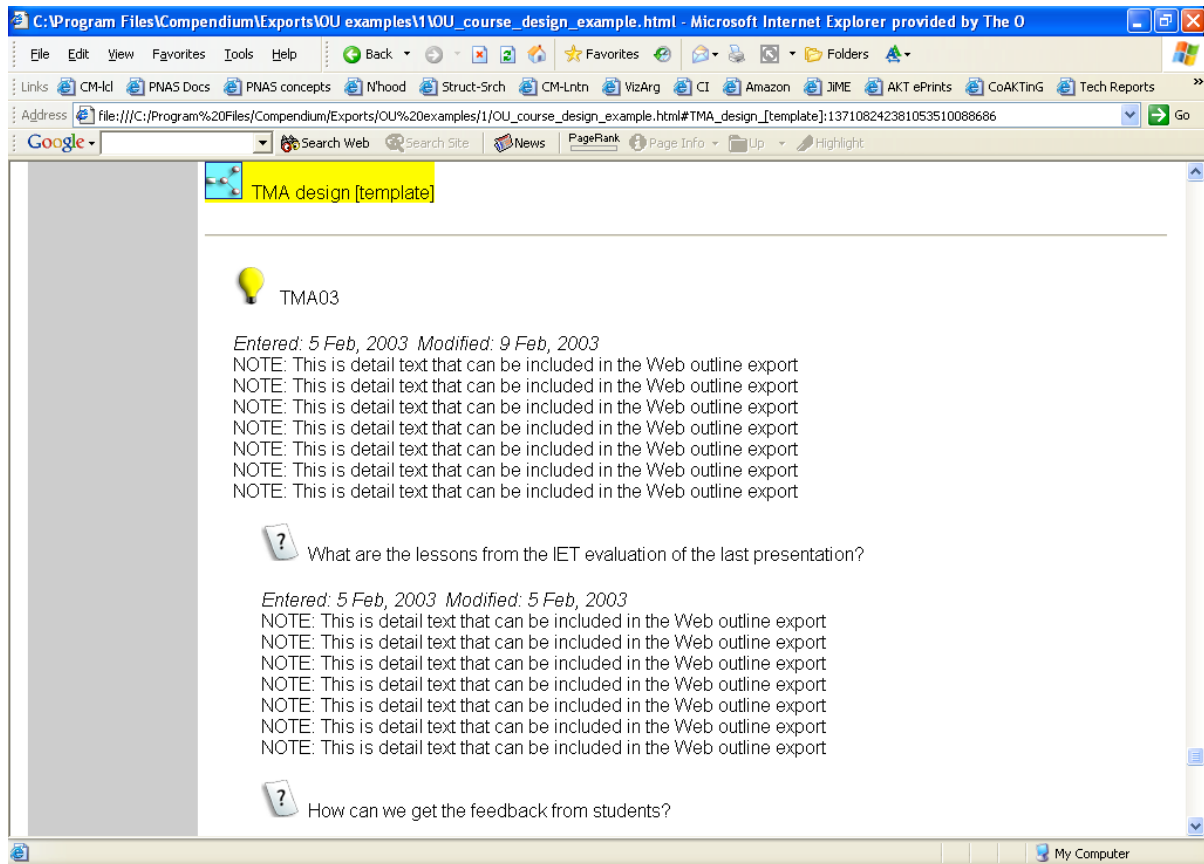
The World Wide Web is the de facto standard way to access information, providing myriad resources through a single browser.

Compendium can convert its projects into two web formats:

1. **A textual listing** of nodes (a hierarchical map becoming an indented outline), viewable through any web browser, and in a form that can be opened directly into Word if desired. You use this to generate a conventional looking 'report' from Compendium.
2. **Visual maps** that can be viewed through the Internet Explorer web browser (for Windows only). These mimic the layout of the maps in Compendium, and nodes can be clicked on to view their contents.

So, if we were to export the TMA Design template, it would appear as follows in a Web browser, first using the *HTML Outline* export, and then the *HTML Views* export.

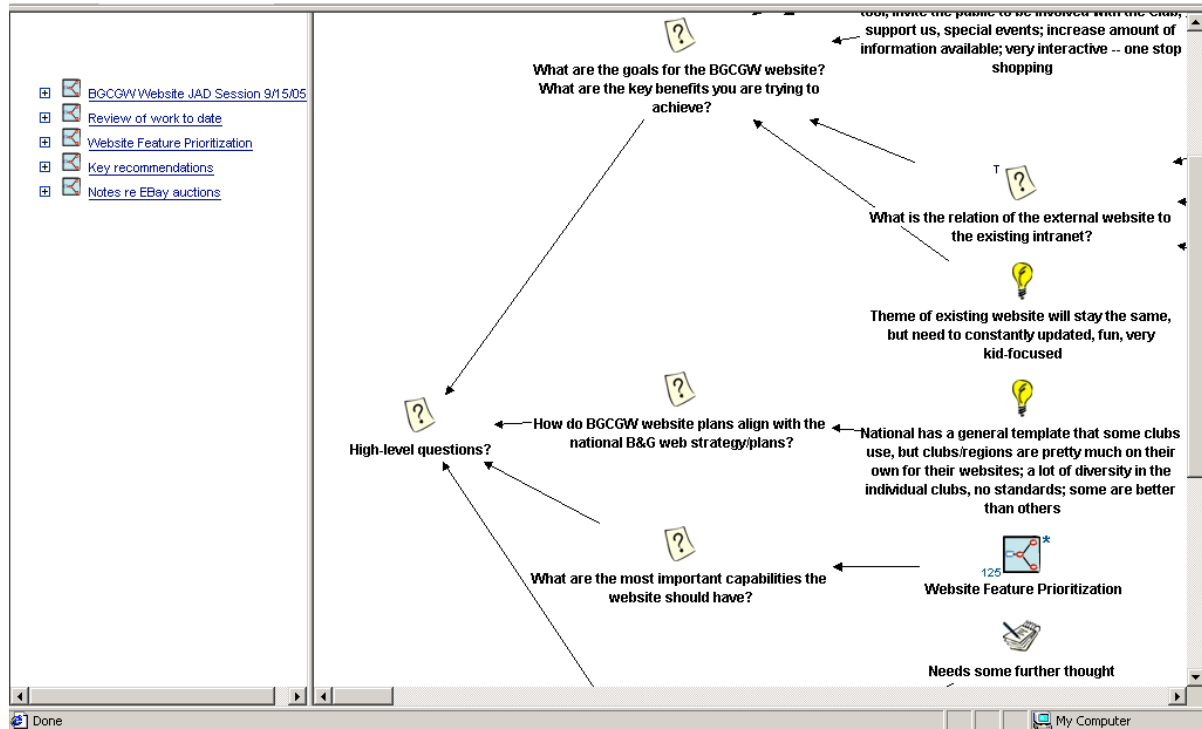
## HTML Outline export for Web



**TIP:** because this is a regular HTML file, you can open this direct into Microsoft Word, and add further formatting, figures, etc. (and then *Save As Web Page...*).



## HTML Views export for Web



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## Exercises 6 and 7: Publishing on the Web

Time permitting, we will walk through how to publish Compendium content on the Web (and from there into Word) to disseminate work to others who do not have the Compendium software.

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## 8 Issue Mapping

Some of you may have seen Compendium in use during meetings, to capture and display back to participants the ideas they have been generating. This 'issue mapping' technique is grounded in an approach developed in the 1970's called IBIS (Issue-Based Information System). In IBIS you have:

- Issues (Question nodes)
- Positions (Idea nodes)
- Arguments (Pro/Con nodes)

Doing this in a meeting takes more practice than mapping ideas on your own, but has been shown to add tremendous value. (As introduced earlier, you can map issues in both informal, brainstorming mode discussions, or use templates to structure meetings around an agreed agenda, or process/method).

### **Issue Mapping Demonstration (both formal and informal)**

To learn more about Issue Mapping, you can attend a training workshop in a version of the technique called *Dialogue Mapping*. See the CogNexus website: [www.cognexus.org](http://www.cognexus.org)

## Question types

An aid to Dialogue Mapping is the following classification of Question types. Each are appropriate at different phases of a meeting or group effort:

- Deontic (a root question like What should we do)
- Instrumental (How?)
- Criterial (How well?)
- Conceptual (What do we mean by x?)
- Factual (How long does that take?)
- Contextual (What is the background?)
- Stakeholder (Who cares?)

## In the research lab...

Compendium is under active development at present. Some of the avenues we're exploring now are:

- Synchronous shared Compendium over the internet (you see my screen)
- Replay video of meetings by navigating maps (e.g. replay the discussion leading up to this *Decision* node)
- Sending and receiving map nodes to/from instant text messaging clients (inc. mobile phones)
- Integrating Compendium with other databases and services (e.g. geographical information systems and simulation tools)

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## 9 Suggestions for Getting Started

1. Use Compendium for personal information management. Drag and drop in documents, URLs, emails, and create maps that organize them according to tasks or topics of your choice.
2. Experiment with tagging and transclusions as you see ways to make your knowledge elements useful in more than one map.
3. Create some templates that help you do analysis or other tasks in consistent ways. Think about what methods or best practices could be supported by templates.
4. Practice dialogue mapping on paper (or in Compendium) with a colleague.
5. Sketch maps of issues in meetings, then transcribe them after into Compendium. When you feel confident enough, bring a laptop to meetings and enter direct into Compendium. (Or type in Word, and then convert it afterwards; you can even use the Detail field of a single node as a kind of word processing page, then take that content out and convert it into structured maps later on)
6. Practice facilitating a meeting with Compendium in a structured modeling session.

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## 10 Compendium Institute website

The hub connecting the international Compendium community is the Compendium Institute website:

[www.CompendiumInstitute.org](http://www.CompendiumInstitute.org)

There you will find the latest case studies, research papers and software, as well as listings of people and training resources.