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## Introduction

Information Mapping™ is a trademarked method to write and structure information. The method has been around for more than 25 years and is one of the major influences on technical writing. And though considered extraordinarily successful for handling information in large documentation settings, Information Mapping™ has not been without controversy and discontent, not in the least because of the trademark.

Find out more about the advantages and disadvantages that go along with Information Mapping™, and see whether it could be of any help for handling the documentation in your organisation.

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## What is Information Mapping™

### Background on the method

The Information Mapping approach dates back to 1965 when Robert E Horn, a psychologist at Columbia University, conducted research on how readers deal with large amounts of complex information. His research, roughly based on Learning Theory and Cognitive Psychology, resulted in a standard approach for organizing and communicating information, referred to by the name Information Mapping.

By 1982, the method and the name became commercialised, leading the company that distributed Information Mapping™ quickly into prosperity.

### Building blocks

Information Mapping™ consists of an integrated set of principles and techniques that enable authors to break complex information into its most basic elements and then present those elements optimally for readers, so they can quickly and easily scan and retrieve the information they need. Central point in the methodology is the information block.

#### The block as the smallest unit of information

Today, Robert Horn is often referred to as the man who kicked the paragraph out of writing. And indeed, one of the first things he realized during his research was that the paragraph is too fuzzily defined to be a solid unit of information, and he replaced it by the block.

A **block** is a chunk of information:

- organized around a single subject,
- containing one clear purpose.

A block is composed of one or more sentences, formula's or figures, and is always identified by a clear label (title). Typically a block has no more than nine sentences.

#### From blocks to maps to documents

Blocks are part of a larger structure of organisation called a map, which can be defined as a collection of one to nine blocks all related to a specific topic. Several maps can build a document. Or, in other words, documents, maps and blocks are all managed as components. And blocks are the smallest reusable components to be managed.

## 7 principles for structuring information

Information Mapping™ consists of a set of 7 principles to organize information effectively so that it is easy to access, understand, and remember.

- 1 chunking  
group content into small manageable units; make information digestible, either for memorization or comprehension.
- 2 relevance  
put together what belongs together, omit irrelevant information
- 3 labelling  
give a meaningful label (title) to each chunk; labels show organization,
- 4 consistency  
use the same labels, titles, formats and/or structures for the same subjects
- 5 integrated graphics  
use illustrations, figures and tables as integrated part of the text
- 6 accessible detail  
use details/illustrations/clarifications where needed; complete abstract presentations with concrete examples
- 7 hierarchy of chunking and labelling  
organize an accessible structure for content chunks by grouping them into larger chunks and labelling them. Chunks without a hierarchy and label are difficult to find and understand. This principle calls for creating a structure to provide accessibility to the chunks. This structure gives users a chance to see the "bigger picture," but also access progressive layers of detail.

## 7 information types

Information types categorize the subject matter. According to Information Mapping™, all information can be captured into 7 information types:

- 1 procedure  
is a task or number of steps leading to a result (operational 'how-to' level)
- 2 process  
describes why a task/process is done (on a management level)
- 3 structure  
describes the structure of a physical, material object (printer, form, machine, ...)
- 4 concept  
describes an idea, a concept
- 5 principle  
a policy, rule telling what is allowed and what not
- 6 fact  
proposition without proof/argumentation
- 7 classification  
sorting of chunks/units into classes

## Presentation modes for information types

For each information type, Information Mapping has format information so that it is easy to use. Below some presentation modes for a procedure:

### Step/action table

Step	Action
1	Locate the recipient's mailing address.
2	Has the recipient's address changed? If <i>yes</i> , go to Step 3. If <i>no</i> , go to Step 5.

### If/then table

If you are serving...	Then serve...
fish	white wine
steak	red wine
vegetarian dish	tea, fruit juice

## Chunking rationale: the magical number 7

Information Mapping™ also draws upon George A Millers research in the 1950s on the limits of the human capacity to process information. In a landmark article entitled "The magic seven, plus or minus two ( $7\pm 2$ ) rule of thumb" Miller presented the idea that short-term memory can only hold 5-9 chunks of information at one time. A chunk can refer to any meaningful unit of information: numbers, words, pictures, chess positions, ...

This concept of chunking and the limited capacity of short term memory became also a basic element of Information Mapping™: Group all information into small, manageable units (blocks and maps). And small is then defined as not more than 7 plus or minus 2.

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## Tools

Information Mapping™ is supported by a number of tools.

### **Formatting Solutions Pro 1.3**

Formatting solutions is a Word-template with predefined formatting for the information types (e.g. step/action-tables and if/then-tables).

Allows integration of Information Mapping techniques using Microsoft Word 97 and 2000.

### **E-Knowledge Manager:**

Tool to export Word-docs to HTML

### **Mapping Object Model**

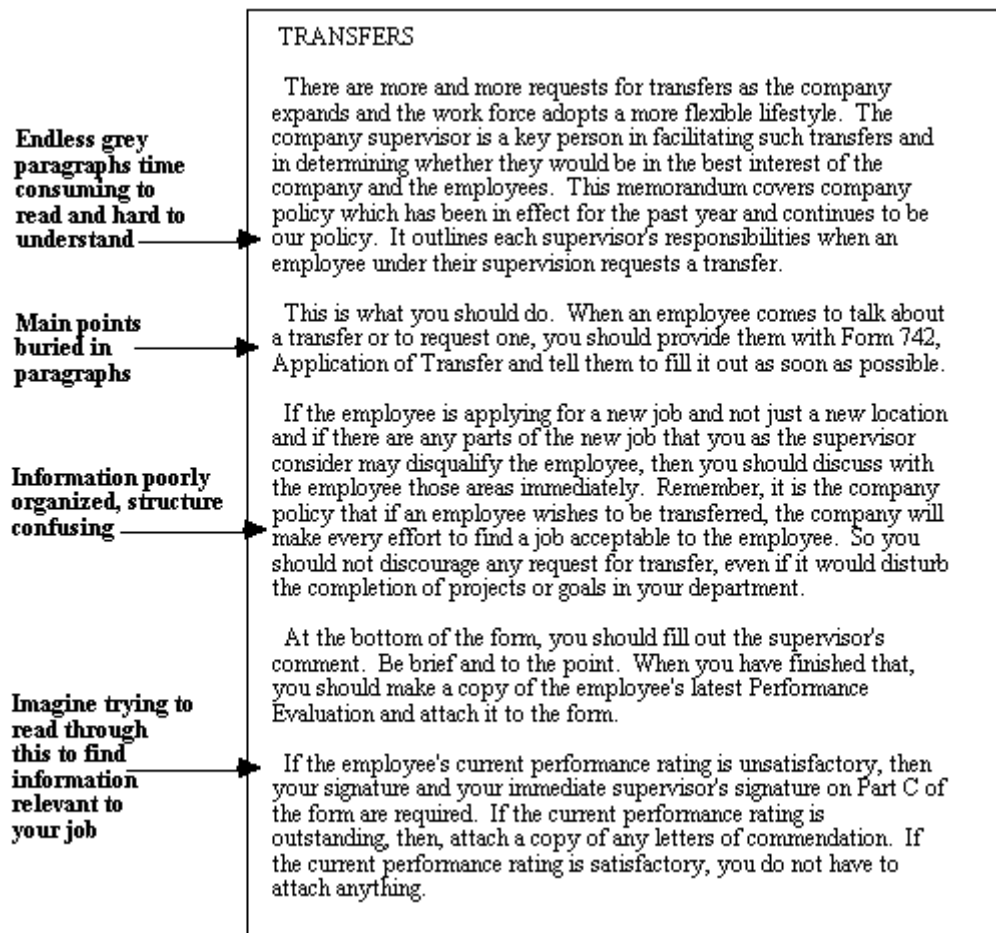
XML DTD, representing the information types.

### **Formatting Solutions XML**

Allows users of Microsoft Word 97 and 2000 to create documents that can be saved in an XML format; integrates with Information Mapping™ technique.

# Example

## Before: a typical business document



## After: The Information Mapping® version

**Find what you're looking for at a glance**

TO: All Supervisors  
 FROM: Director of Human Resources  
 SUBJECT: SUPERVISOR'S RESPONSIBILITY IN FACILITATING TRANSFERS

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**Introduction** As the company expands and the key work force adopts a more flexible lifestyle, there are more and more requests for transfers.

This memo outlines your responsibilities when an employee requests a transfer.

**Procedure**

Step	Action						
1	Provide the employee with Form 742, Application for Transfer.						
2	Discuss with the employee any areas in the new job that you consider may disqualify the employee.  Remember: It is our policy that if an employee wants a transfer, the company will make every effort to find a job acceptable to the employee. So you may in no way discourage a request for transfer.						
3	Fill out the supervisor's comments at the bottom of the form.						
4	Attach a copy of the latest Performance Evaluation.						
5	<table border="1"> <thead> <tr> <th>IF the current performance rating is...</th> <th>THEN...</th> </tr> </thead> <tbody> <tr> <td>unsatisfactory</td> <td>both you and your immediate supervisor must sign part C of the form.</td> </tr> <tr> <td>outstanding</td> <td>attach a copy of the letter of commendation.</td> </tr> </tbody> </table>	IF the current performance rating is...	THEN...	unsatisfactory	both you and your immediate supervisor must sign part C of the form.	outstanding	attach a copy of the letter of commendation.
IF the current performance rating is...	THEN...						
unsatisfactory	both you and your immediate supervisor must sign part C of the form.						
outstanding	attach a copy of the letter of commendation.						

**Analytic labels highlight structure of information**

**Standardized formats make writing efficient**

**Fast retrieval, too, when you have to go back and look it up**

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## Pro and con

### Pro

- Information Mapping™ has a basic, straightforward set of guidelines on how to write and organize information. The method can turn non-writers into writers.
- Information Mapping™ can quickly lead to results, especially in large documentation settings, provided that there is enough training.
- Information Mapping™ can ensure consistency in team writing.
- Information Mapping™ is supported by a number of tools.

### Con

- The trademark is debatable, not to say controversial. After all, Information Mapping™ is nothing more than a set of loosely defined, general principles drawing upon Learning Theory and Cognitive Psychology. Information Mapping™ would be much better off in the open source movement:
  - Information Mapping has hardly evolved since its genesis.
  - There is no information/support available on the web, unless you register and pay a license.
- The tools are limited in their functionalities and do not allow any sidesteps besides the Information Mapping straitjacket.
- The seven imposed information types are debatable, and hard to explain to a large group of users. Other information architectures, e.g. DITA (the Darwin Information Typing Architecture) or Structured Writing (see below), are more flexible and accessible in their information typing.
- The Information Mapping templates quickly lead to boredom. Their layout is limited and unvarying.
- Trained writers experience the method as a restriction on their creativity.
- Information Mapping is very generic and not tailored to the specific needs of a company.

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## Structured Writing as the non-trademarked alternative

If you have skilled writers in your organisation and some notions of information design, then Structured Writing is highly recommended for two reasons:

- it is an open, non-trademarked standard, so you don't have to pay for using it.
- it is more flexible, and not so restricted as Information Mapping™. So the method can be tailored to the specific needs of an organisation.

### Origins

Structured Writing has the same origin and founding father as Information Mapping™. In fact, Robert Horn coined the term Structured Writing in the early 1980's more or less to by-pass the trademark, as he states in his October 2001 speech, when receiving a lifetime award by the Association of Computing Machinery SIGDOC:

- "Actually the structured writing approach dates back to 1965 when I was a researcher at Columbia University's Institute for Educational Technology. The earliest publication is Horn, et. al., 1969. Most of the literature on structured writing refers to it by a trademarked name 'Information Mapping' which is a registered trademark of Information Mapping, Inc., Waltham, MA. <http://www.infomap.com/> However the generic term for the approach, which I suggested in the early 1980's, is 'structured writing'. Often authors of 'structured writing' documents use different and more loose standards for analysis, organisation and display of information than those who practice Information Mapping's method. The characteristics described in this article refer to those which I first synthesized into Information Mapping's method. Since the name 'Information Mapping' is trademarked, we must abide by the requirements of the trademark law and mention that fact."

Today, Structured Writing is quickly gaining popularity in the technical writing community.

### Building blocks and principles

Structured Writing is an integrated set of novel techniques, approaches, and principles:

- The information block as unit of information.
- The precise specification of different kinds of information blocks for specific purposes.
- A content analysis approach of information types that clusters different information blocks.
- An intermediate unit of structured writing, the information map, for easy and natural topic clustering.
- A comprehensive and systematic set of criteria for labeling blocks and maps.
- A specification of where graphics should be used and where text would be better.
- Easy-to-scan formats and templates.
- The incorporation of research results from many fields and the creation of an ongoing research program to keep the methodology current

## Information matrix

	Information type A	Information type B	Information type C	Information type D	Information type E	Information type F	Information type G
Block type 1	=====			=====		=====	=====
Block type 2		=====	=====				
Block type 3		=====			=====		=====
Block type 4		=====	=====	=====		=====	
Block type 5	=====			=====			
Block type 6		=====	=====			=====	
Block type 7					=====		=====
Block type 8		=====				=====	
Block type 9				=====		=====	
Block type 10	=====		=====			=====	
Block type 11					=====		
Block type 12		=====		=====			=====

If block 1 is 'Definition', then information types A, D, F and G have definitions

Information type C has block types 2, 4, 6 and 10 associated with it.

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## Resources

- <http://www.infomap.com/> (Information Mapping™ world-wide headquarters)
- <http://www.imap.dk/> (Information Mapping™ European headquarters)
- <http://www.attek.be/> (Information Mapping™ Belgian licence owner)
- <http://www.stanford.edu/~rhorn> (Collection of papers on Structured Writing by Robert Horn)