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MANAGEMENT ASSISTANT'S GUIDE TO INFORMATION SEEKING

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To the reader

The management assistant is a true information professional, an information expert in the very sense of the term. The job often involves demanding information retrieval tasks, and everyday tasks also involve substantial amounts of information seeking from various sources. Indeed, an understanding of the information search process, and the ability to retrieve trustworthy information with speed and efficiency, are key aspects of the management assistant's and secretary's job.

The Internet offers access to up-to-date global information flows. It is an extraordinary information pool offering virtually endless opportunities. Nevertheless, due to the web's dispersed and chaotic nature, searching for information on the web has become its own distinct kind of art form. In professional information search, Googling alone is not enough. There is also life outside the web. Traditional printed media, documents and oral sources remain important. It is easy to get caught up in the web's hype and forget what a great interface the book is.

This guide is intended primarily for the management assistant, secretary and the student of the field. It addresses information needs that are specific to the profession. A recent study completed at the HAAGA-HELIA Universities of Applied Sciences indicated that information expertise, which covers not only the ability to retrieve information but also the ability to assess its relevance to the task at hand, is one of the key competence requirements of today's management assistant. This skill will be increasingly important in the future.

My work as a teacher of future management assistants proved to me that there was a need for this kind of book. The management assistant and secretary needs a basic guide that not only introduces the reader to the profession's key information sources, but also discusses what information retrieval is about on a more general level.

Management assistant education in HAAGA-HELIA is also provided in the English language, and I therefore edited the Finnish version of this guide, *Johdon assistentin tiedonhankinnan opas* (Haasio 2009) to suit the needs of students studying in English. The emphasis of this guide is on English sources, but plenty of sources relevant to the Finnish context are also presented, some of which are available only in Finnish.

The first part of this guide addresses the information retrieval process and factors affecting it. The second part introduces sources that are keys to the management assistant's job and how to find them.

I wish to thank my employer HAAGA-HELIA University of Applied Sciences for giving me the opportunity to write this book as a part of my job. I especially wish to mention Kaarina Korkeaoja for her support, Irja Törnqvist for reviewing the manuscript and Merja Drake for the excellent discussions we had on this topic. I also wish to thank my wife Minna Haasio, who as a professional in the field gave me lots of great tips on the content.

I hope this book will prove useful to all management assistants and secretaries in Finland. The web offers access to great amounts of information – it is up to us how well we learn to use it.

In Akaa, Viiala, on Epiphany 2009

Ari Haasio

1
To the sources of information!

We live in an information society in which information is the most important factor of production. We need information both at work and during our free time. And just as information is increasingly significant, new information is exponentially produced. The information society is a society of massive information flows. Magazines, television, radio, books, the Internet and many other media constantly relay new information for our use.

It is the Internet, above all, that has contributed to the massive growth in information flows. The Internet also increasingly functions as an authority – people seek almost all of their information from the web, even though sources that are just as good or even better are also often available. The Internet is a good servant, but it cannot be a master. Googling and an unbridled faith in the information provided by websites are dangerous. The information we use at work must be tested and valid – and that is why source reliability is crucially important.

It is worth bearing in mind that books, periodicals and other traditional media remain important sources of information, also in the management assistant's and secretary's job. A good reference library is often an invaluable source of information for the management assistant! The same holds true for the company archive, whether it functions as a convenient source for daily information needs or spans the company's entire history.

A great part of the management assistant's and secretary's job is spent on information work. Everyday tasks integrally involve the retrieval of new information for both oneself and one's superior. Indeed, the world of endless information flows can become problematic: plenty of information is available, even too much. What documents to consult? Which of them are trustworthy? And, above all, how can I find the information I need with speed and precision?

Alaterä and Halttunen (2002) have aptly described the objective of information search as follows: "the right information, for the right user, at the right time and in the right format." This motto is especially applicable to the management assistant and secretary. In working life, we

simply do not have the time to endlessly explore the world of information flows, but must locate the information we need with speed and precision.

Tuominen (2005) and Koski (1998) have warned us about information overflow. Tuominen (2005) talks about information catastrophe that might face us – should we not take the matter seriously. He argues that information supply is exceeding human capacity, resulting in information overflow. Furthermore, the stress and the hectic pace of today's working life further increase information needs. The vicious circle is complete.

We nevertheless must find our way out of the vicious circle. We simply can't go and hide away in a retreat somewhere. Media literacy and information management skills will save us. We will cope better in the world of information flows if we know how to collect information in a manner that is as rational as possible. Information search skills are an asset in working life!

Information search skills are not valuable in their own right, but they allow us to cope better in today's information society. Googling alone is not sufficient to meet the demanding needs of today's working life. The information needs of both the management assistant and secretary are often very sophisticated and require excellent information search skills and media literacy. Indeed, it can be said that one of the key strengths of a good management assistant and secretary is the ability to supply the right information to whoever needs it with speed and precision. Information retrieval is therefore a key competence requirement. And that is why it needs extra attention.

2
Information seeking as a process

The information society is a society of information seeking. We constantly need new information both at work and during our free time. We need information to support decision making, to act successfully in communities and to cope in the information society. Information is interesting in itself, too – we can be simultaneously interested in several fields due to our job or hobbies. As such, we can even talk about the *homo informaticus* – a person for whom information search is a species-specific characteristic.

This chapter reviews in more detail what is meant by information seeking and specifically on what are the key characteristics of professional information seeking. The chapter also clarifies some key terms that are useful to know.

2.1 What is information?

Information means many things and its meaning can be a source of confusion.

In Finnish, for example, the word *tieto* means both information and knowledge, and it is therefore sometimes difficult to differentiate between the two concepts (Vakkari 1999, 18). Their relationship can, however, be illuminated by means of the chain of terms below (cf. Haasio & Savolainen 2004).

DATA → INFORMATION → KNOWLEDGE → UNDERSTANDING → WISDOM

Data (lat. *dare* = to give) refers to a coded message (Niiniluoto 1997, 28). For example, the ones and zeros fed into a computer are data. Information, on the other hand, refers to all the data, ideas, facts and fictional products that are communicated either formally (e.g. magazines, books, the Internet) or informally (e.g. discussions). For data to transform into information, some form of communication is required.

According to Plato's classical definition, knowledge is justified true belief (Platon 1979). The Finnish word for knowledge, i.e. *tieto*, dates back to the 16th century and derives from *tie*, meaning road or path. Knowledge is therefore the knowing or finding of a path, which is a very apt description. (Haasio & Savolainen 2004.)

There is some variation in the way that knowledge is understood in the different branches of science. In accordance with the broad definition of knowledge, however, we can think that all information that alters an interpreter's understanding of some matter is knowledge. This means that a book or webpage does not contain knowledge, but information. It is only when we read the book that the information it contains can transform into knowledge, and only to the extent that we assimilate the information contained therein.

The knowledge that we have constitutes our understanding. Indeed, it can be said that understanding is the sum of our knowledge. Finally, wisdom is our ability to make use of our understanding. It combines understanding and experience.

In summary, the Finnish dictionary *Suomen kielen perussanakirja* (1996) defines knowledge as follows:

1. the act of knowing, the knowledge of facts, being aware of something, awareness
2. an understanding about something based on fact
3. a matter or thing of which something is known; information, data
4. a message, communiqué, notification or news
5. knowledge acquired via study or similar means; understanding, scholasticism, wisdom
6. a suffix used in the name of sciences or branches of knowledge (e.g. *maantieto*).

2.2 From information need to information use

All information seeking is based on the need for information. We always seek information for some purpose. True, we can seek information out of pure interest for some matter, but even then it is the interest that is the causal factor.

Information research is a discipline that studies information need, information seeking, information retrieval and information use. The discipline also defines what is meant by these terms.

Information seeking research emphasises information seeking as a process involving many stages. It begins with the generation of information need, transforms into information seeking and terminates in information use.

2.3 What are information needs?

Information needs can be divided into professional and non-professional information needs. Professional information needs refer to the needs we encounter when performing a given job assignment or similar tasks. Non-professional information needs relate to our free time, such as hobbies or other activities outside the workplace, e.g. shopping.

We often also talk about information needs that are specific to a given profession or professional group. The nature of the management assistant's job, for example, is of a certain kind and this generates certain kinds of information needs. Succeeding in the job means that these needs must be met. In such cases we often talk about task-specific information seeking (cf. Byström 1999), which has the aim of satisfying the information needs generated by a given task.

Information needs vary by person and task. Sometimes the information need can arise from the feeling that something is not understood or clear. And sometimes the need can be very specific, i.e. we know what kind of information we want. An example of the former could be the need to collect more information about EU legislation. We do not know exactly what we want because we cannot specifically define our need. Therefore, instead of precisely defining our need, we seek to achieve an overall picture of the matter. On the other hand, an example of a specific information need is the need to know a company's net sales for last year. In this latter case, we know exactly what we are looking for.

TASK: Think about what kinds of information needs apply to some specific job, for example the job of the management assistant and secretary.

2.4 Information retrieval and information seeking – what do they mean?

Information retrieval and information seeking are not same things. Information seeking is a more holistic process that starts with information need and ends in information use. Information retrieval, on the other hand, refers to the actions we take in order to find the information we need. According to Marchionini (1995, 8), information retrieval is primarily an activity conducted on the computer, and is one aspect of information seeking.

Entering a search query into Google is an example of information retrieval. Although today most information retrieval is done electronically, traditional methods are just as applicable. For example, if a library still maintains a traditional card catalogue, using this catalogue to find the book you are looking for is an example of information retrieval using manual methods. Electronic information retrieval may involve a database or the Internet. In these cases, we need to enter the appropriate keyword or word string to find the information we are looking for.

Information seeking is a broader concept. There are many factors that affect how and from where we seek information and for what reasons we seek the information We might be used to some specific sources, for example, and that is why we turn to these sources when we seek new information. Information seeking can be systematic or random. A pre-planned search from a database or the Internet is an example of the former, while the spontaneous arousal of interest when reading a professional magazine is an example of the latter. In the latter case, we are not specifically looking for information, but accidentally encounter something useful and then make use of it in our job.

2.5 Information use as a part of the information seeking process

The information seeking process also covers information use. How do we use information? How do we process it or adapt it for different uses? How do we produce new information based on what we have? All this is information use at its best. For example, after finding information about a company's financial indicators, we might produce a summary report and forward it to whoever needs it. This is information processing. We combine available information and create a new information totality.

According to Brenda Dervin (1992), information use can be investigated by asking how the information we acquired helped us to get through some particular situation. In practice, this means asking how useful the information was to the user in some particular problem-solving situation. Haasio and Savolainen (2004) provide examples of how information use is manifest in practice:

- *understanding something*: gathered information helped in the formation of ideas or concepts, or helped to understand something
- *planning something*: the information eased planning or preparation or supported decision making
- *motivating action*: the information helped to get started with some task
- *achieving control over something:* the information brought some matter or situation under control
- *evading something unpleasant*: the information made it possible to exit or evade an unpleasant situation
- *relaxation*: the information made it possible not to think about an unpleasant situation either partly or fully; the information enabled relaxation and rest after a stressful situation
- *contacts*: the information helped someone get out of isolation and establish contact with other people.

Situations like the ones above are very typical to management assistant's or secretary's job.

2.6 Examples of professional information seeking

The information seeking practices of various professional groups have been studied extensively. Information seeking research is a distinct discipline and investigates how managers, journalists, researchers, teachers and many other professions seek information. Information seeking research has clarified, for example, how people in different professions seek information, from where they seek information and how they use it.

The information seeking practices of different professional groups have also been studied in order to identify the factors affecting professional information seeking on a more general level. Based on these studies, various models have been created to explain the factors that affect our information seeking practices. The most recognised of these include Carol Kuhlthau's process model, Leckie & Pettigrew's model of task-specific information seeking and Brenda Dervin's sense-making theory.

These models help us gain an understanding of the factors motivating information seeking. At the same time, we can also think about our own information seeking behaviour. Are the presuppositions of the models valid also in our own information seeking practices?

2.7 Brenda Dervin's sense-making theory

Brenda Dervin's sense-making theory is perhaps the most well known theory in information seeking research. It aims to clarify the factors that produce information needs and to describe the information seeking process.

Sense making is, above all, about communicative behaviour involving the following key actions:

1. information search
2. information processing
3. information creation
4. information use.

According to Dervin, sense making is about much more than information. It can be:

1. information
2. intuitions
3. opinions
4. estimates
5. judgments
6. questions
7. etc.

In other words, sense making covers everything we use to organise the world and make sense of it.

Dervin has described information seeking as akin to "walking along a path". She uses the idea of a gap encountered along the path as a metaphor for the barriers to information acquisition. In order to find information to solve a problem, a person needs to build a bridge over the gap (cf. 1).

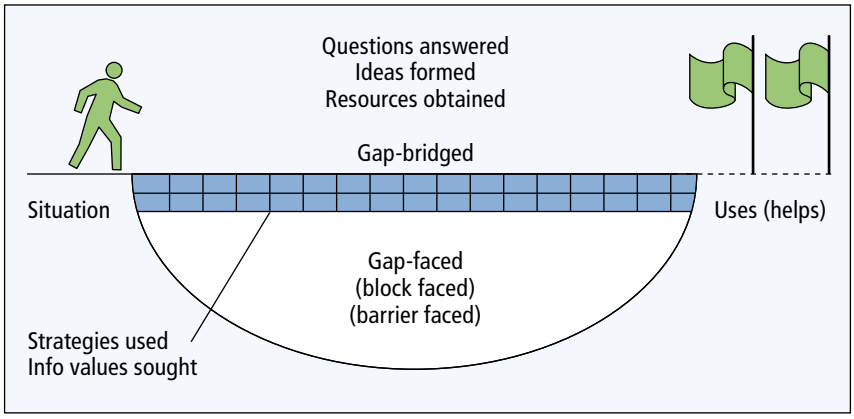

Figure 1. Sense-making theory's conception of information seeking. Source: Dervin 1992, 68.

We often encounter Dervin's "gaps" in working life. For example:

1. We don't know where to find the information we are looking for.
2. We don't know how trustworthy the source is.
3. We don't understand the source (e.g. the source is in a foreign language).

In practice, all situations involving information need are gap-faced situations. Indeed, Dervin's thinking is problem-specific: someone encounters a problem that s/he must solve. This requires information. The person is gap-faced when encountering the problem.

Dervin has divided the gaps into different kinds of situations that call for different kinds of answers. She calls these the 5W gaps. The gaps are classified according to the kind of question the person asks when encountering the gap. These questions are:

WHY questions

- The person seeks an explanation as to why s/he is on the path or faced with a particular situation along the path. "Why am I sick?"

WHEN/WHERE questions

- The person wants to know when s/he should act or when something can be done: "How long will this go on?"
- The person seeks cues about where to go. "Where should I seek help?"

WHAT questions

- The person seeks a description of the path's details or conditions. "What is the cost of the item I want?"

WHO questions

- The person thinks about actors. "Who will advise me?"

HOW questions

- The individual wants to know how to get ahead on the path or move on. "How will I get the money for it?", "How will I find a new job?"

(Source: Haasio & Savolainen 2004)

The gap can be said to be a characteristic of the situation. The gap forces the individual to assess his/her actions. The gap is something that the individual wants to learn something about or to discover why the journey was interrupted. The gap is something that the information seeker does not yet know sufficiently well.

We continually encounter Dervin's situations and gaps in working life. They can be big problems or routine information needs. But, whatever they are, an answer must be found.

You can learn more about Brenda Dervin's sense-making theory on her website http://communication.sbs.ohio-state.edu/sense-making/.

2.8 Information seeking – the journey from uncertainty to certainty

In her model, Carol C. Kuhlthau (1993) describes the information seeking process as a journey from uncertainty to certainty.

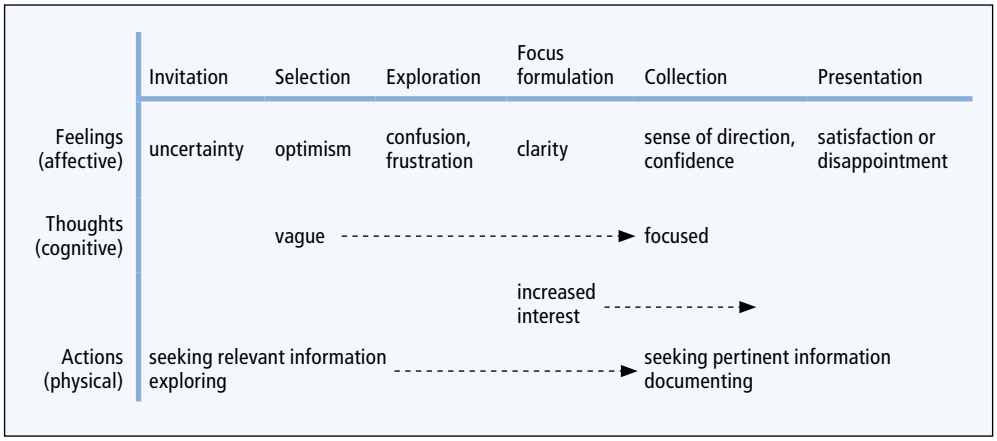

Figure 2. Model of the information search process. (Source: Kuhlthau 1993, 43)

According to Kuhlthau, information seeking is governed by three primary factors: thoughts, feelings and actions.

When analysing the different stages of information seeking, we need to pay constant attention to these three factors. The information seeking process itself can be broken down into six stages (see figure 2), which are:

1. Invitation
   - Thoughts and feelings are uncertain.
2. Selection
   - Optimism, marked by ambiguity of thought
3. Exploration
   - Confusion, frustration and uncertainty arise on the emotional level. Information acquisition is hindered by the seeker's vagueness of thought, and, for example, defining search terms may be difficult.
4. Formulation
   - Feelings become more certain.
   - Interest grows.
   - Thoughts become more specific.
5. Collection
   - Confidence and direction can be observed on the emotional level. Information is increasingly funnelled.
6. Presentation
   - The outcome produces either satisfaction or dissatisfaction on the emotional level. The results are presented verbally or in writing.

If we think about what our own information seeking process was like in connection with some broader problem situation, we will be sure to identify all of Kuhlthau's process stages in our own information seeking process. It should be noted, however, that even though the objective is to solve a problem, we can get disappointed. The problem is not always solved; the results are not always what we desired etc. In other words, information seeking can increase frustration and uncertainty instead of removing them!

Kuhlthau's and Dervin's formulations show that information seeking is a process, not a static state. Information seeking is about communication, interaction and, above all, constructive action. It is about seeking knowledge either individually or with others.

3
Professional information seeking – an important part of the job

Information retrieval skills have become a key requirement in many professions. We need to know how to find reliable and up-to-date information with speed and efficiency. Internet is an excellent tool in most cases, but the best sources are often found elsewhere.

Information is a key factor of production. It is capital that allows the organisation to develop its operations and innovate on new products and services, and therefore perform better in the market place. Information is also a key management tool, and, information management is an often talked- about topic. The old saying "information is power" remains a very apt description.

3.1 The importance of information management skills and media literacy

Information management skills are an often talked-about topic and involve much more than the ability to find the right information. Success in information management requires:

- excellent knowledge of the sources in one's field (online, journals, magazines etc.)
- versatile information search skills
- source criticism
- the ability to produce new information from acquired information.

Googling alone is not sufficient. Google is a useful tool, but the desired information is often found elsewhere. That is why it is good to be aware of other online search methods and sources.

Information management skills relate closely with media literacy. Media literacy is a skill that every citizen should have today, and can be described in terms of narrow, functional and critical media literacy.

Narrow media literacy refers to the ability to use different kinds of machines, equipment and communications tools. Functional media literacy adds the functions of reading and writing, i.e. the ability to express ideas, interpret media texts and acquire information. Critical media literacy emphasises the user's ability to differentiate important information from less important, to locate the most relevant information from information flows, and to form a personal opinion about matters.

Media literacy in the narrow sense is not sufficient in working life. Critical media literacy should be a basic job requirement for anyone whose job involves information-related tasks. The special characteristics of information acquisition from the management assistant's perspective are discussed in chapter 4.

3.2 Organisational knowledge

Ikujiro Nonaka and Hirotaka Takeuchi (1995) divide organisational knowledge into hidden (tacit) knowledge and explicit (conceptual) knowledge. Chun Wei Choo (1998) adds cultural knowledge to this classification. What do these types of organisational knowledge mean?

Tacit knowledge is knowledge that is difficult or impossible to make explicit or visible. All employees accumulate tacit knowledge over time, i.e. knowledge that helps them to cope with their tasks. This knowledge is not recorded anywhere, but is transferred from one person to the next either verbally or by learning-by-doing.

Every organisation has "unwritten rules". These rules are hidden and therefore tacit knowledge. A new employee cannot know them and learns them only after s/he is told about them ("our practice is...") or through the process of trial and error. The management assistant or secretary usually possesses great amounts of tacit knowledge that allows him/her to complete a variety of tasks.

3.2.1 Conceptual knowledge

Conceptual knowledge is knowledge about something and is based on our ability to conceptualise things. Legislative work, for example, constantly conceptualises things. Conceptual knowledge usually covers things such as facts, information, proofs, concepts, claims and operating principles.

Conceptual knowledge can be processed and saved. It is typically systematic and organised. User instructions and software manuals are good examples.

3.2.2 Cultural knowledge

Cultural knowledge is difficult to express or encode. Cultural knowledge is knowledge about the human environment. It allows us to act successfully in the environment in which we participate, for example the company we work for.

Cultural knowledge reflects organisational reality. Typical examples are an organisation's values, beliefs and assumptions. Cultural knowledge can involve substantial amounts of tacit knowledge. For example, the expectations and beliefs prevailing in an organisation are often tacit knowledge.

Knowledge is a key factor of production for today's organisation. Indeed, it can be said that in the corporate world knowledge is a tool without any value in itself. Companies value knowledge that supports the company's strategic operations and improves profitability. As such, knowledge is purely instrumental. This is a very utilitarian approach to knowledge: only knowledge that is of direct benefit to the company's operations is generally considered to be valuable.

3.2.3 Information needs in working life

The kind of information you need in your job depends very much on the nature of the job. The general manager, management assistant and maintenance officer have different information needs, even if they work in the same company. This is why information management research talks about task-based information needs.

Information needs can be simple or complex depending on the task at hand. In some cases, we might not even recognise an information need, but solve the problem based on our earlier experience. In other cases, we might encounter an entirely new kind of information need, and finding the information will involve lots of time and effort. Our prior experience plays a key role in determining how we experience any particular situation and information need.

Katriina Byström (1999) has noted that job complexity is essentially a subjective experience. Situation-specific factors, such as pressing deadlines, multi-tasking and motivation, can also affect our perception of task complexity. In other words, the more complex the task, the more it

requires analysis that is not routine. Complexity grows if an employee feels that the successful completion of a task requires additional knowledge and skills. Similarly, complexity grows if a task or problem can be solved in alternative ways but none of them seems clearly better than the other. Vague or multiple objectives also increase task complexity. The more complex the task, the more difficult it is from the information seeker's perspective. (Byström 1999, Haasio & Savolainen 2004.)

TASK: Write down what kinds of information needs you have during a typical working day. How challenging are they? How easily do you find a solution?

4
Information seeking by the management assistant: key characteristics

- *"The Internet has increased the secretary's role as a seeker of information."*
- *"The availability of information has increased massively."*
- *"You have to find relevant information fast."*
- *"Information seeking is important and a big part of the assistant's job."*

(Comments by management assistants about the significance of information seeking and the changing nature of the job, ENNASSI 2008)

The previous chapter discussed the information seeking process in the light of various research studies and theories. But what is the management assistant's information seeking like in practice? What kinds of information-related situations do the assistant encounter, and how and from where does the assistant find the answer? Some of the typical information needs and problem situations encountered by the management assistant and secretary are discussed below.

4.1 The need for singular information

Much of the information needed by the secretary or management assistant is singular in nature. This means facts and details, such as timetables, birth dates, company sales figures etc. The management assistant's need for singular information is well documented in Soile Tuorinsuo-Byman's EURASSI study (2008) completed at HAAGA-HELIA University of Applied Sciences, analysing the job profiles of management assistants in eight European countries. Information is typically acquired using several different channels, for example the following:

- colleagues
- telephone
- Internet
- in-house company information systems
- databases
- newspapers
- professional journals.

Besides singular information, management assistants and secretaries are also tasked with retrieving substantial amounts of background information on a variety of topics for their superiors. Information seeking has become such an important aspect of the management assistant's and secretary's job that education in the field is increasingly emphasising knowledge of various information seeking channels and information sources.

The need for reliable and up-to-date information is increasingly significant. In the course of their daily duties, management assistants and secretaries regularly need to weigh the quality and relevance of sources etc. Speed is also an advantage: information is usually needed immediately, which places further demands on the information seeker's ability.

Management assistants and secretaries typically encounter information needs in the following areas:

- travel
- legislation
- conference and meeting arrangements
- etiquette
- financial indicators
- competitors
- contact information
- etc.

The above list is by no means comprehensive, but illustrates the diverse information needs faced by management assistants and secretaries today. Information needs, of course, vary depending on the kind of organisation and field in which the management assistant or secretary works. In some organisations, management assistants and secretaries are responsible for a great deal of information search, while in others they have a lesser role. The field of business has an impact on the kind of information needed. For example, in a pharmaceutical company the management assistant deals with pharmaceutical information, in an engineering company with technical information, and in a law firm with legal issues etc. This poses new challenges for information seeking: the assistant must become familiar

with key information sources (e.g. databases) and terminology that is relevant to the organisation in which he or she works.

Nicholas Belkin (1984) talks about information producers, users and conveyers: In his scheme, producers are journalists, writers and producers of information. Users are all people who need and seek information for some specific purpose. Conveyers help users to find the information they seek. Information specialists and librarians, for example, are information conveyers who seek and deliver the information to those who need it. Management assistants and secretaries also often take on the role of the information conveyer. Information is sought not only for the completion of one's own tasks, but also for the needs of one's superiors. A lot of information seeking is done by proxy. This means that the information is acquired through a third party, i.e. the information is not retrieved personally, but somebody else does it for you. For example, the manager does not personally search the web to locate a competitor's net sales for the previous year, but assigns the task to the assistant or secretary. In such a case, the search is completed by proxy. This is often the secretary's and assistant's task. Only a part of information searches are done for personal use.

It should also be noted that the assistant or secretary often needs to refine the information s/he has acquired before forwarding it ahead. This might involve preparing a table of figures or similar. The task might also involve pooling together bits of information from several sources. In other words, seeking individual facts is not enough; information must also be refined and adapted.

Refining information is often a key aspect of the assistant's and secretary's job. The information gathered must be adapted into a meaningful format by combining bits of information from diverse sources into a compact totality. This is not only challenging, but also introduces greater responsibility. When preparing such summaries or compilations, the assistant or secretary needs to think carefully about what is important and what needs to be emphasised, and also ensure that the information is up-to-date and reliable. In the role of information conveyer, the assistant and secretary are responsible for the kind of information they submit in support of decision-making.

Besides being an important information seeking channel, the web is visible in the assistant's and secretary's job in other ways. In many countries, you can find virtual assistants who can be hired by companies and other organisations when the need arises. The idea is that the organisation needing the service places an order through the web. Virtual assistants

can be used to complete just about any tasks relating to the assistant's job, all the way from translation and editing to making travel arrangements.

Virtual assistants usually run their own company and work from home. Companies can commission a single assignment or bigger project from the virtual assistant.

Will the virtual assistant replace the traditional management assistant or secretary? Most likely not, but the virtual assistant does offer a professional service to SMEs and freelancers for whom such a service might otherwise be out of reach. The virtual assistant also introduces flexibility to the assistant's job.

The ENNASSI study (2008), which charted the future competence requirements of management assistants graduating from HAAGA-HELIA, emphasised online skills and especially a command of diverse information search skills. Indeed, it can be said that tomorrow's assistants must have at least the following online skills:

- information search
- information management
- mobile messaging
- production of information for the web.

This places substantial demands not only on the education of new management assistants but also on updating the competencies of management assistants already engaged in the profession.

For example, developments in mobile communications will necessarily expand the role of mobile phone technologies. Arranging meetings, sending files, driving instructions etc. are already possible with today's technology.

Information generation, and especially the filtering and refining of already available information, will play an increasing role in the assistant's job profile. Management assistants have the important role of conveying information to their superiors. At the same time, assistants assess and emphasise issues as they select key points from information flows, which they then convey to management. This shows how the management assistant also exercises a substantial amount of power, just like the information specialist. When seeking information on a given theme for the superior, the assistant is expected not only to locate key information sources, but also to summarise the information in accordance with the matter at hand. It is this process that best highlights the role of the management assistant as a producer, selector and refiner of information.

4.2 The many faces of information seeking

Many information needs and situations are such that we do not even consciously notice them. We complete a number of routine information search tasks each day: we locate telephone numbers, addresses and similar details in familiar places.

Some information seeking situations are more challenging, however. In these cases, it is possible that the use of one source or channel is not sufficient and we have to use our information retrieval skills in diverse ways. We might need to make use of several different kinds of sources for any given information need: the Internet, oral sources (e.g. colleagues and experts), professional literature and newspapers. It is crucial that we do this with speed and precision. This requires that the assistant is aware of diverse information sources and knows how to use them.

The following key information sources are worth mentioning:

- electronic sources (e.g. the Internet)
- printed sources (books, magazines etc.)
- informal sources (colleagues etc.)*
- documents (e.g. minutes of meetings).

The answer is often found simply by calling an expert or asking a colleague. This, too, is information seeking, just like completing an Internet search or using a dictionary is.

* Informal sources are described in more detail on page 90.

5
Source criticism

When using printed or electronic sources, source criticism is important. Source reliability is especially important when seeking information on the job. The information we use in working life must be relevant, up-to-date and trustworthy.

The web is a forum open for everyone and it should therefore be used with care. You will find lots of useful information on the web, and also lots of information that is ideologically, commercially or otherwise biased, or even incorrect. That is why source criticism is especially important.

According to Haasio (2008), at least the following should be taken into account when assessing the reliability of online sources:

1. Who has produced the content and who is the administrator?
2. Does the author write in his/her own name or as a representative of some organisation?
3. What is the text's genre?
4. How good is the style/grammar?
5. What are the author's motives?
6. Does the webpage indicate sources?

Alaterä and Halttunen (2002) also emphasise the importance of assessing search results. They recommend that we focus especially on the following:

1. impartiality
2. authorship
3. trustworthiness
4. up-to-dateness
5. size of the publication
6. format of the publication and technical functionality.

Company websites, for example, can be poor sources of objective information. They seek to convey as good an image of the company as possible, and therefore the information provided cannot be absolutely reliable. It

is always good to think about what the website seeks to achieve. This means that we should be aware of any ideological, commercial or other interests when assessing the reliability of the source.

You should always exercise caution if a website does not clearly indicate who has produced the text. A reliable source always indicates the author or organisation behind the text. The text's style, correctness and grammar are also worth attention. Similarly, a site's graphic look and functionality can be very revealing. Check if the links work, when the site was last updated, and quality of the site as a whole. Does it seem reliable? Remember, however, that upon closer scrutiny many websites that seem reliable are actually quite the opposite. Don't be fooled by nice-looking tables and pseudo-scientism!

You can also find "scam sites" of well-known websites on the net. You cannot always trust a site even if it declares itself as the official website of some official party. Anybody can make such a claim.

Sometimes the web address communicates something about the site's authorship or reliability. For example, sites ending with .gov are official sites of U.S. authorities, while sites ending with .uk.gov are those of U.K. authorities. Other useful endings worth remembering include: .edu (U.S. schools and universities) and .mil (U.S. military).

The ~ character (tilde) is also useful if it is part of a website address. It usually indicates a personal website or that of an association.

Check also what sources have been used and if they are clearly indicated. If a website does not disclose its sources, its reliability is always less than average.

Websites maintained by the authorities, research institutes, universities and similar organisations are usually good sources. They strive to be unbiased in their communications. But when seeking political information, for example, it can be the case that a government's website might present a substantially distorted account of some issue (e.g. human rights in Tibet, the position of Kurds etc.).

Databases are often a good source of reliable information (see pp. 72–77). They are usually produced by trustworthy parties: universities, research institutes etc. However, before consulting a database, it is good practice to familiarise yourself with its description and clarify how comprehensive it is: what documents and for what period it contains.

You can read more about source criticism on the web here:
The Good, The Bad & The Ugly: http://lib.nmsu.edu/instruction/evalcrit.html

Due source criticism should also be exercised when using printed sources. The fact that you are gathering information from a printed source does not necessarily make it more trustworthy. Nevertheless, a printed source has passed through some sort of inspection: the publisher, for example, has approved the text, which indicates that a degree of professionalism is to be expected. This does not change the fact, however, that a substantial amount of material that is of poor quality or biased can be found in printed media.

6
Wikipedia as a source of information

We are often tempted to resort solely to Wikipedia (http://en.wikipedia.org) for our information needs. And this is not surprising, given that it is the net's biggest free encyclopaedia, the English version of which contained 2.3 million articles on a variety of topics at the end of April 2008. However, the quality of the articles varies substantially: some are comprehensive, others far from it.

Wikipedia is a community-based encyclopaedia into which anyone can write articles and add to existing ones. It is based on a constructivist or communal idea of information production. That is precisely its strength, and also its weakness. People share information with each other on topics that interest them and they know well.

According to Tuominen (2005, 66), one of Wikipedia's key strengths is its up-to-dateness: thanks to citizens' journalism, it contains information on highly current affairs, in contrast to many commercial services. Wikipedia also enables the democratic production of information: We are no longer bound to the opinions of large media houses or commercial information producers, but can access alternative views on topics we are interested in. Indeed, freedom of speech in Wikipedia is very close to the democratic ideal.

The idea is excellent, but does it work in practice? People are voluntarily contributing millions of pages to Wikipedia. But how reliable is the information?

Because in principle anyone can write anything on Wikipedia, there is the danger that the quality of the articles will vary and in some cases even contain shortcomings or mistakes. The writer and the source material might remain unknown, and therefore verifying the correctness of the information can be difficult.

Sometimes Wikipedia is also home to so-called "Wiki wars", in which two persons representing competing points of view take turns in altering the content to suit their views. As a rule, however, the Wiki community exercises its own internal control and ensures that there is no inappropriate content. There have also been cases of outright wrongdoing in Wikipedia,

for example inappropriate content has been placed on an article on George W. Bush, as a result of which the article had to be "locked". Articles are sometimes locked so that users can no longer edit them.

Wikepedia is often cited as a source in newspaper articles. But is it a suitable source of information for the management assistant, or should other online sources be used?

Wikipedia can be very useful when seeking links to further sources or when seeking popular information. But we should not use Wikipedia as the only source for professional needs. We should always verify the information elsewhere.

Google has developed its own version of Wikipedia, i.e. Knol (http://knol.google.com). Knol also aims to share knowledge and create it together. Users can write their own articles (knols) alone or in groups. Knol differs from Wikipedia, however, in that the writers are not anonymous. Everyone presents themselves in their own name. This ensures better source criticism with regard to authorship. Knol can also contain several articles on the same topic, each with a slightly different stand or point of view. Nevertheless, whether you use Wikipedia or Knol, you should ensure the reliability of the source with care.

Figure 3. Knol (http://knol.google.com) is Google's answer to Wikipedia.

7
How to formulate a successful search query

We often find the information we need by "Googling", i.e. writing a search query on Google or some other search engine. This is called a "dirty search" because it produces lots of search results. The search has not been specified in detail, but the information might nevertheless be found.

But if we want to complete a more thorough and comprehensive search, we need to learn more about formulating search strings and choosing the right keywords.

7.1 Boolean logic

Searching for information using Google or other search engines or databases is based on Boolean logic, which was developed by the British mathematician George Boole. Boolean logic uses the following three operators:

- AND
- OR
- NOT

In most search engines and databases, these operators are written in English in capital letters.

AND operator

The AND operator functions combines two or more search terms. It is also the default operator in most search engines and databases, i.e. if you don't write an operator between keywords, the search engine automatically combines them with the AND operator.

For example, if you are looking for information on HAAGA-HELIA admissions, you write the following into the search field:

HAAGA-HELIA admissions

The search engine will then read your search request as follows:

HAAGA-HELIA AND admissions

and search only for pages that contain both the terms HAAGA-HELIA and admissions.

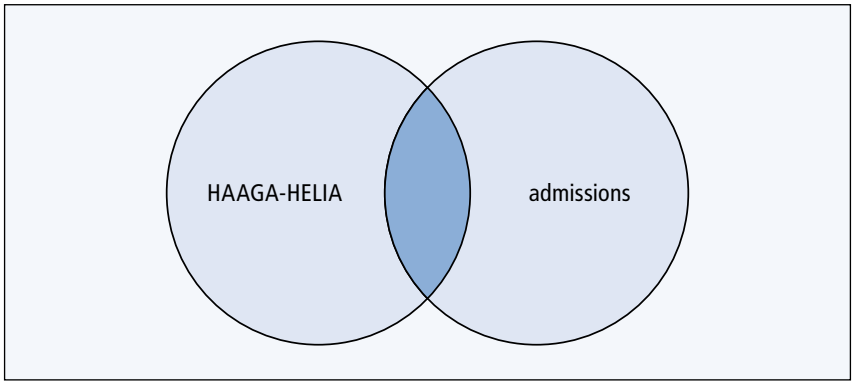

Figure 4. AND operator.

The OR operator is useful when completing a search using analogous terms, for example synonyms (e.g. cottage, cabin, chalet). When you combine search terms with the OR operator, your search result will display all the pages containing one or more of the terms you combined with the OR operator.

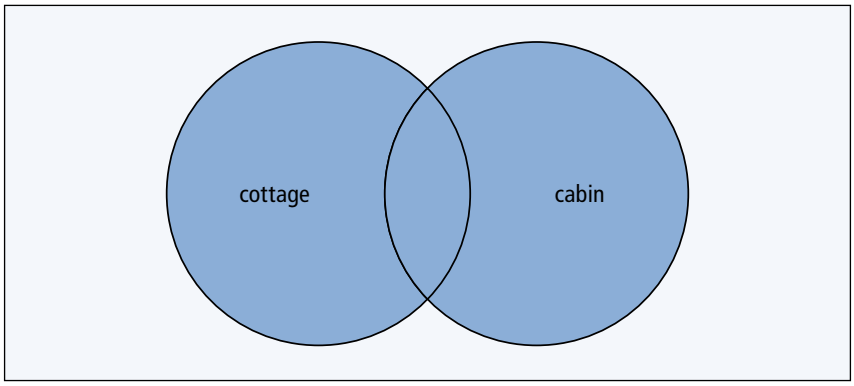

Figure 5. OR operator.

If you do not want a specific term or string of terms to be displayed in your search result, you can block them with the NOT operator.

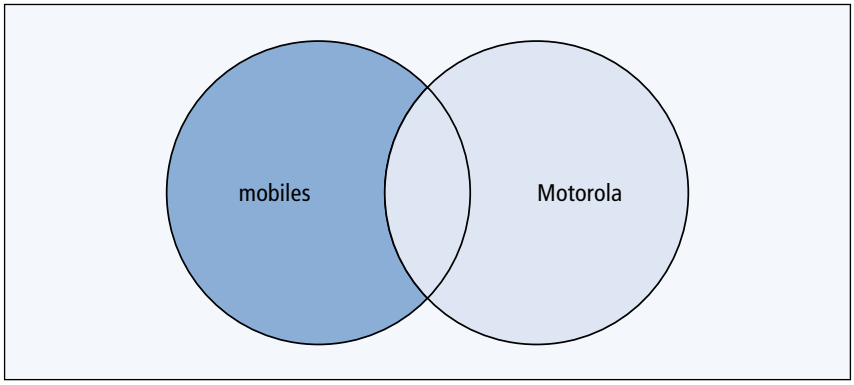

Figure 6. NOT operator.

For example, if you write the following in the search field

mobiles NOT motorola

your search result will cover all pages on mobiles excluding those that contain the word Motorola. Keep in mind that the NOT operator will exclude many pages and not just the Motorola website!

It is important to understand Boolean logic to grasp the principles behind information search. Most search engines offer a number of advanced search options, removing the need to write the search query in Boolean format. The principles behind Google's advanced search are discussed on page 44.

7.2 Parentheses and the order in which operators are combined

If you have used Boolean operators in your search query, the operators are combined in the following order: (parentheses), NOT, AND, OR. Parentheses are used to change the order in which operators are combined.

For example, if we make the following search string: Nokia AND phones OR cellular, our search result will display all pages containing Nokia and phones in the same page, as well as all pages containing only the term cellular.

On the other hand, if we formulate our search string using parentheses: Nokia AND (phones OR cellular), our search result will display all pages containing Nokia and either the term phones or cellular or both terms.

Many databases and some search engines (e.g. Clusty) allow the use of Boolean logic to specify search terms, and it is therefore good to know how to use it. Form-based advanced searches (e.g. Google) have become increasingly common, but they do not offer the same level of sophistication as Boolean logic in the formulation of search queries.

7.3 Choosing and formulating keywords and search strings

It is good to start by thinking about the terms that best describe the search task. This should include consideration of the following:

1. What are the terms that are most likely to be in the text? It is important that we think about the terms that the webpage's producer has most likely used.

   Example: If we want to know Lasse Viren's winning time in the 10,000 metre race in the Munich Olympics, the term "winning time" is probably not the best search query because it will probably NOT be contained in the document (e.g. statistic).

2. Is it good to truncate keywords and is truncation supported by the search engine? Truncation is not possible in search engines on the web, but it is possible in most databases.
3. Do your keywords have synonyms or homonyms (e.g. bank [the edge of a river] = bank [a financial institution]?
4. Which search engine or directory should be used? Is Google always the best choice?
5. A successful search begins with good search plan and search logic. Think about the relationships between concepts: which are higher level and which are lower!

Think carefully about the terms that the information producer has probably used. Is the text written in popular language or the jargon of some specific field, or is it scientific?

Successful Internet search can be reduced to the following seven steps (Haasio 2002):

1. Be aware of the sources you are using: the World Wide Web was not originally designed to be used as a mass media tool.

2. Try to find something relevant. Complete a quick search using a key search term.
3. Learn the methods used in advanced searches and familiarise yourself with the basics of Boolean logic. Learn how to truncate words in the right way. It is difficult to succeed without these skills.
4. Complete a thorough and well planned search.
5. Familiarise yourself with other search services.
6. Stay up-to-date with developments on the web. A good way to do this is to access lists on recent developments.
7. Share your knowledge.

What if your search is not successful? How should you proceed? If you have too many hits, then

1. further specify your terms
2. think about whether you have truncated your term in the wrong way
3. check your search logic
4. think about other ways to limit the scope of your search
   - time
   - language
   - targeting, e.g. only the page headline
   - place the most important term first in your search string
   - leave out articles and words that are too general
   - use phrase search, e.g. "West Highland White Terrier" or "University of Tampere".

If you have too few hits, then

1. think about whether you have used all of the key search terms
2. maybe some of the terms should be truncated.

If there are no documents,

1. check your search logic
2. consider whether some other information source would be better
3. reduce the number of search terms.
   - Using too many search terms often leads to a zero result! A good method is to start with the quick and dirty technique to get lots of hits, some of which will most likely also be relevant. These

documents can then be browsed to get more terms that are relevant, after which you can complete a new search using them etc.

If you try the same search using a different search engine, you might find the information you are looking for!

Keep in mind that Google and other search engines only locate a fraction of the information contained on the web. The so-called deep web or invisible web includes all of the pages that search engines do not reach.

But why are search engines unable to locate certain pages? There are several reasons. The most common explanations are the following:

- the document contains file formats that the search engine does not recognise
- there are no links to or from the page
- search engines have been blocked from accessing the page by the content producer
- dynamic databases block search engine access
- the service requires registration.

Search engines cannot access the data contained in databases, for example. The search engine will find the database's homepage, but not the actual database. This information must be accessed using the database's own search engine.

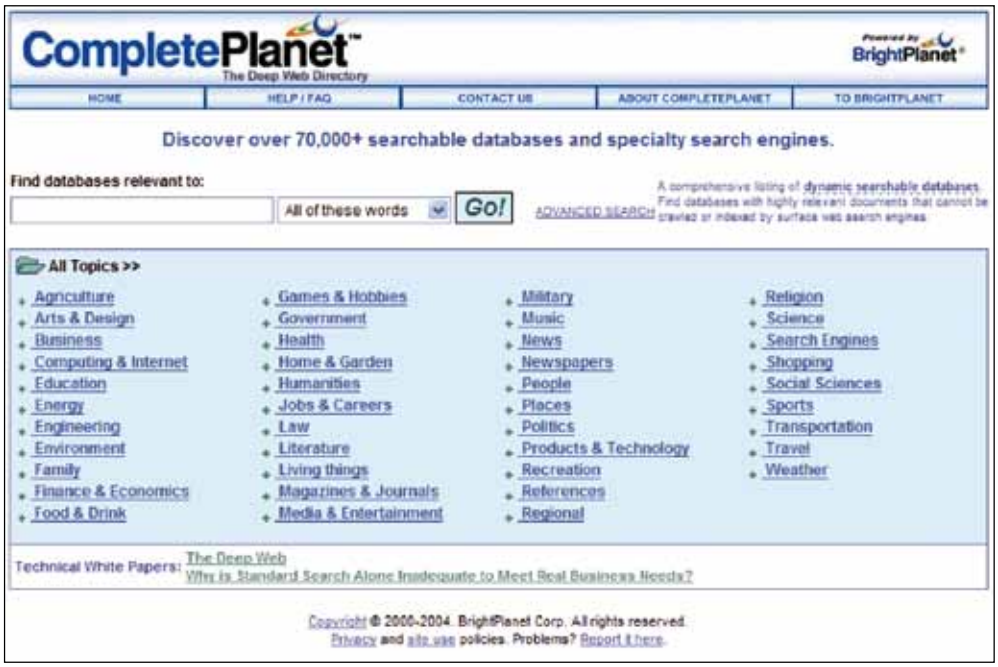

Figure 7. Complete Planet (http://www.completeplanet.com) is a directory that allows you to locate deep web content not accessible by conventional search engines.

Remember also that various topical directories and link lists allow you to search for content on the deep web. A good example is http://www.completeplanet.com, which, however, is somewhat biased towards U.S. content.

7.4 Truncation and phrase search

Learning how to truncate words in the right way can significantly improve your search result. Search engines search for character strings. Finnish, for example, has many case endings, and it is often useful to truncate the word before completing the search. Truncation also allows you to avoid variations between singular and plural (e.g. woman vs. women) or variations in regional spelling (organisation vs. organization).

The following characters are often used as truncation markers: ?, # and *. Check the help menu of the search engine or database to determine which truncation marker is used.

At present, search engines on the web do not support truncation, but many databases do.

You can use truncation to replace a character within a word as follows: man, men = m*n. This feature is available only in some databases. It is not available in Google or other search engines.

Phrase search is an excellent search method. You should use it when you want your search result to display a phrase or string of words in exactly the form you entered them in the search query. In other words, the search result displays all pages in which the characters, including spaces, are in the same order as you wrote them in your search query.

Phrase search is done by placing your search query in parentheses: "haaga-helia university of applied sciences", "mika häkkinen" or "to be or not to be".

Example:

When searching for the name of some specific person, we place it in parentheses: "Mika Häkkinen". The search engine will then seek only those pages containing the phrase Mika Häkkinen. In contrast, if we would have written Mika Häkkinen without parentheses, the search would have produced not only the pages we seek, but also a lot of useless ones. These would have included the following: Saija Häkkinen's website, where she tells about her family consisting of her husband and their 3-year-old son Mika.

7.5 Limit your search!

In addition to using keywords, truncation and phrase search, you can improve your search result by limiting it in various ways. For example, if you are using Google, you can limit your search by server, file type etc. Different search engines allow you to limit your search in a variety of ways, and you should always make your choices on a case-by-case basis.

The most common ways to limit your search are by

- date
- language
- region
- file type
- page field (e.g. page headline, text, URL address)
- domain (e.g. haaga-helia.fi).

Limiting your search in one or more of the above ways can significantly improve your search result. Using limiters is a handy way to avoid irrelevant search results especially when the search result would otherwise be unnecessarily large. Limiters are discussed in the section on advanced Google search (see pp. 44–46) but the same principles also apply to other search engines.

You can limit your search by accessing the search engine's advanced search options. Limiters are the best way to avoid too many search results.

8
Google – the world's most popular search engine

Google is the only genuine search engine for many of us. Google is easy to use, but it is also good to learn more about it in order to get the most out of its many features. It should be noted here also that the Finnish version of Google (http://www.google.fi) is not nearly as comprehensive as the English version (http://www.google.com).

Before completing your search, think about whether it is best use Google's basic search, advanced search (see pp. 44–46), special search (e.g. images, news etc.) or whether to use some other search method or engine. Google is not the best choice in all cases. The choice of a search engine should always be made on a case-by-case basis.

Unfortunately, too many of us consider Google to be the only search engine. It has been estimated that 50 percent of the world's searches are done with Google. In some countries, such as Finland, the figure is even higher.

8.1 Google's basic functions

Google's basic search can be accessed via Google's homepage at address http://www.google.com (see Figure 8). It is sufficient when only a couple of keywords are used or when completing a "dirty search". This usually generates the desired result, although there will probably also be lots of irrelevant hits, with the result that browsing and comparing hits can be difficult.

Figure 8. Google's homepage is at address http://www.google.com.

In addition to basic search, Google's homepage contains the following:

- advanced search
- preferences
- language tools
- images
- videos
- maps
- news
- shopping
- Gmail
- more
  - groups
  - books
  - scholar
  - finance
  - blogs
  - You Tube
  - calendar
  - photos
  - documents
  - reader
  - sites
  - even more
- iGoogle
- sign in.

8.1.1 Advanced search

As noted by Haasio (2007), Google's advanced search should be used when

- you want fewer but better search results
- a standard query produces too many search results.

In Figure 9, the four upmost fields are used as follows:

- In the field *all these words*, write the words that must be on the page/s you are seeking on the web. This corresponds to the use of the AND operator in the search query (see. p. 35).
- *This exact wording* or phrase corresponds to the phrase search (see p. 41), except that you do not need to use parentheses.
- The *one or more of these words* field generates results that include at least one of the words you have provided. This is a useful method when you are seeking synonyms, for example.

Example:

If you are seeking information about caravans, you can write the words caravan and trailer in the *one or more of these words* search box, and the search result will display pages containing either of the terms. Conversely, if you had written the words in the *all these words* field, the result would have displayed only pages containing both of the words – now only one of them needs to be present.

One or more of these words corresponds to the OR operator in the search query (see. p. 35).

Figure 9. Google's advanced search allows you to formulate your search query effectively and also further specify it using various methods.

If you do not want some specific word or words to be present in the pages you are seeking, write them in the *...any of these unwanted words* search box.

> Example: You wish to find pages on Martti Ahtisaari on the web, but you are not interested in his family. In this case, write *Marko Eeva* in the *any of these unwanted words* box, and your result will exclude all pages containing the name of the president's wife or son.

The advanced search function also allows you to limit your search by:

- language
  - You can choose the language of the pages you are looking for.
- file type
  - You can seek PowerPoint presentations or PDF files by choosing them in the drop down menu, after which the search engine will only seek the specified file types. On the other hand, if you wish to exclude PowerPoint presentations from the search result, choose *no* instead of *only* in the dropdown menu (NB! This function is available on the Finnish version of Google's homepage).
  - The file type limiter is useful if you are seeking publications such as ministerial reports, annual reports, articles etc. In these cases, limit your search to only PDF. This generates fewer and only the most relevant search results because these kinds of documents are nearly always saved in PDF format.
- date
  - The most up-to-date information is found on websites that have been recently updated. If you want to search for pages that have been recently updated, limit your search here! You have the following choices:
    - anytime
    - past 24 hours
    - past week
    - past month
    - past year.
- region
  - You can limit your search to websites in a specific country by choosing the country from the dropdown menu.
- where keywords show up
  - You can limit your search to words that are present only in the title, links, text or URL of the page. For example, if you choose to limit your search by title, then Google will limit the search

to words found on page titles. This function is a handy way to limit your search to pages that are most relevant! The choices are:
    - anywhere in the page
    - in the title of the page
    - in the text of the page
    - in the URL of the page (i.e. the website address)
    - in the links to the page.
- site or domain
  - You can limit your search to specific domains (e.g. haaga-helia.fi=only HAAGA-HELIA's website) or country (e.g. .ru=Russia).
- usage rights
  - If you wish to seek only pages that can be freely used or edited, you can choose this option from the dropdown menu. Remember, however, that if you choose the *free to use, share or modify, even commercially* option, your search result will be substantially limited, and there is the risk that you will loose many relevant pages.

The advanced search limiters described above can be accessed by clicking on *date, usage rights, numeric range, and more* on the advanced search page.

Advanced search allows you to formulate your search query with versatility. The same principles apply for all of Google's advanced search methods (e.g. Scholar, blog search, image search etc.). Keywords are written in the boxes provided and the search can be limited in various ways. These limiters vary according to the kind of material sought. For example, image search can be limited by file type (.jpg, .gif), Scholar can be limited by author etc.

8.1.2 Preferences

By clicking on the *preferences* link, you can define the search language, the interface language, the number of hits displayed at a time and whether you wish to open the hits in a new window. If you chose the last of these alternatives, it will be easier to compare and browse through the results.

8.1.3 Language tools

Google's language tools cover three important functions: text translation, webpage translation and search across languages. Translations from major languages (German, French etc.) into English and vice-versa produce a very satisfactory outcome.

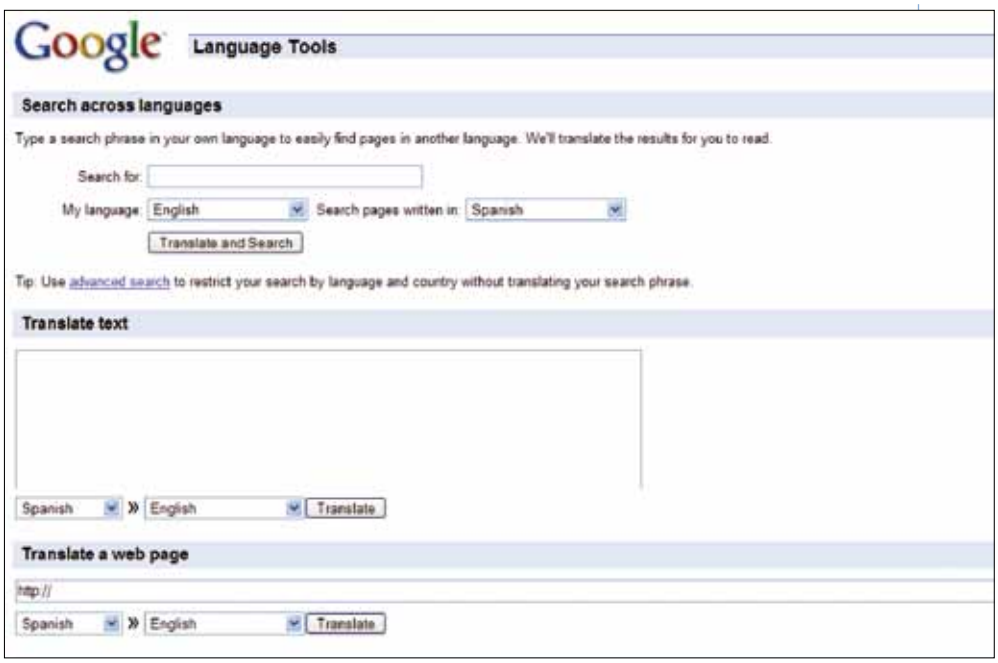

Figure 10. Google translator allows you to translate text and websites from one language to another and complete searches across languages.

For example, if you want to complete a search across languages, define your source language as English, write your keywords in English, and also define the language of the pages to be searched (e.g. Spanish). You can change the language of the pages to be searched in the dropdown menu *search pages written in*. Google will then automatically translate your search query into the target language, find the relevant websites in the target language and automatically translate them into the language of your choice. For example, you can search for pages on Middle East peace negotiations by writing your search query in English and choosing Arabic as the target language, after which your search result will cover pages in Arabic that Google will automatically translate into English for you.

The *translate text* function allows you to write text into the box provided and have it translated into another language. The *translate a web page* function allows you to translate an entire website into the language of your choice. This is done by writing the website address into the space provided and choosing the language that you want the website to be translated into. Note, however, that Google translates only text written in the text fields of websites, and not banners for example.

The *language tools* page also allows you to choose the interface language, and contains links to the Google homepage of different countries.

Pages 85–86 discuss in more detail other translation tools and dictionaries available on the net.

8.1.4 Image search

Google advertises its image search as being the most comprehensive on the web. However, Google's image search also generates lots of irrelevant hits. This is because the search is not limited to image titles or descriptions.

Google's image search nevertheless offers a number of advanced search options, which allow you to search by file type (.gif, .jpeg, .bng, .bmp), size, coloration (black-and-white, colour), domain name and content type. The content type filter allows you to limit your search to portraits or news images, for example.

Remember that any images you find are always subject to copyright! This means you cannot use the images without permission. Image banks that allow you to freely use the content do exist, however, allowing you to use the images in accordance with set limitations. These services include the following:

- http://www.sxc.hu
- http://www.freefoto.com.

Some services set specific conditions on the commercial use of the images, which are specified on the websites in question. It should be noted, however, that you can also find documents governed by Creative Commons licences on the web, covering both text and images. You can use such documents freely as long as you indicate the source. Creative Commons documents and how to find them on the web are discussed in more detail on pages 78–79.

8.1.5 Discussion groups

A distinct feature of Google is that it allows you to search for messages on Google's own discussion groups and Usenet. Although this service has marginal significance for professional information search, it can be useful when seeking information on trends, public opinion and similar issues.

8.1.6 Directory

Directories can be very useful when seeking key sites on a given topic. It should be noted, however, that Google's directories differ across languages,

and the quality of the content also varies: some topics are comprehensively covered, while others are only superficially covered with poor links.

Directories are discussed in more detail on pages 64–65.

8.1.7 Blogs

Google also allows you to limit your search to blogs. Blogs usually contain little of value for professional purposes, but they can be useful: for example, when seeking information about the opinions that people have about company's products or services. This, of course, also applies to discussion groups.

Google's blog search also contains a number of advanced search options, e.g. limiting your search by author. But Google's blog search does not come close to covering all blogs on the net. If you are searching Finnish blogs, for example, you should also visit *Blogilista* (http://www.blogilista.fi), which covers more than 20,000 Finnish blogs classified by topic.

8.1.8 Other features and iGoogle

By subscribing to Google, you will have free access to the following services:

- Gmail, with more than 6 Mb of space
- a calendar, which you can share with friends or colleagues
- the "Picasa" photo album
- an RSS reader that allows you to collect RSS feeds from different websites (see p. 89)
- a document service that allows you to save files and open them from any computer in the world.

The calendar, for example, can be very useful for small- to medium-sized companies. There is no need to invest in expensive internal systems because the calendar can be used by all employees free of charge. The person setting up the calendar distributes user rights to the persons he or she chooses.

Gmail can also be very useful, especially for private use. It is usually better to use an e-mail account other than the one provided by one's employee for personal use. Gmail has a good junk mail filter and provides plenty of memory for messages. The service doesn't jam even when sending large files such as images.

You can open a Google account by clicking on the *sign in* link on Google's homepage. The link opens on the account page, where you can

either sign in or click on the *create an account now* link to establish an account.

iGoogle allows you to personalise many settings. You can add content to Google's homepage according to your own preferences and add gadgets on topics that interest you. Gadgets are feed-like features from various services. They allow you fill Google's homepage with news feeds from newspapers of your choice and other services that have subscribed to the service.

Figure 11. iGoogle allows you to view the latest news from websites of your choice. You can also group news items by theme into sub pages. Shown in the image is the author's sub page on IT topics.

8.1.9 Google Scholar

Google Scholar is a service that allows you to search for scholarly articles. The search only targets articles, not other web content. It should be noted, however, that although Scholar allows you to freely read all abstracts, the articles themselves might be fee-based, as is often the case. Only a small percentage of scholarly articles on the net are free (see also p. 87 on article search).

Figure 12. Google Scholar's homepage is at address http://scholar.google.com.

In Google's *advanced scholar search*, you can write keywords in the boxes provided just like in Google's standard search. You can target your search either by entire article or the title of the article. The latter is an effective way to reduce the number of hits if the former produces too many.

You can also limit your search by author, publication date or publication title. For example, if you are seeking articles written by some specific person, you should write the name of the author in the box provided (not in the boxes with the green background, which are for free searches).

Google Scholar makes use of a variety of article databases such as Elsevier. Scholar covers all scholarly fields and often produces a very thorough search result.

Figure 13. Google's advanced scholar search.

Google Scholar can by no means replace fee-based article databases, but it can be very useful when you need to locate scientific articles in support of company decision making and you do not have access to fee-based databases.

TASK: Familiarise yourself also with these services for locating scientific articles:

http://www.ingentaconnect.com – contains nearly 30 million scientific articles on a variety of fields. The abstracts can be read free of charge.

http://www.doaj.org – a directory of scientific articles that can be read in full on the web.

8.1.10 Google Books

Google has embarked upon an ambitious project involving the digitalisation of entire texts, and as a result Google Books allows you to search for entire books on the web. You can search for books that can be downloaded in full over the web or for all books, in which case you will get links to bookstores and libraries from where the book you are looking for can be found. The service does not cover Finnish libraries. You can preview some of the books.

8.1.11 Google News

Figure 14. The Google News homepage. The service covers thousands of news sources that Google monitors in real time.

Google News is by far the most comprehensive and versatile free news service on the web, offering real-time monitoring of news stories from all over the world. The service covers news items in tens of languages from the U.K. and Sweden through to the Arabic countries and China.

Google News is an auto-generating service and its homepage is updated at regular intervals. The homepage is divided into categories, including business, world, health, sports, entertainment and most popular. The links on the left side of the page open into the theme of your choice: e.g. click *business* to get business news. Remember also Google Finance as a source of business news (see pp. 54–55).

The service for different countries may have the same language but the content nevertheless differs. For example, the U.S. and UK services cover the same news items and media, but the content differs due to differing regional emphasis. That is why News UK and News U.S. have different content. The U.K. version emphasises the U.K. and European perspective, e.g. the EU, while the U.S. version focuses on matters of interest to people in the U.S. The same applies to Google News in Spanish, French etc.

Google News also contains a news archive (*advanced news search*), which allows you to search for news stories from the past month. There is also an archive search function. *NB! The former allows you to search for articles dating back no further than the past month, while the latter allows you to search for articles dating back centuries!* Archive search contains only a fraction of the sources included in Google News, however. In addition, most of the contents in the historical archive are fee-based.

Figure 15. Google News's advanced search. You can limit your search by publication date, news source (e.g. Reuters, BBC) and location. In addition, the occurrences box allows you to limit your search to anywhere in the article, the headline, the body copy or the URL of the article.

8.1.12 Google Finance

If you are only interested in business news or information, Google Finance is an excellent source. It monitors key developments, such as U.S. stock prices and world economic news, in real time. The service also contains plenty of information on listed companies in different countries.

Figure 16. Google Finance allows you to quickly locate key information on listed companies in many countries. Shown in the image is Google Finance's information on Nokian Renkaat. It displays contact information, key financial indicators, the latest company news, top management information etc.

Google Finance is not limited to U.S. business information. It also contains plenty of information on European companies (see figure 16). Google News is also an excellent source of business news, but it should be remembered that it contains news items dating back no further than the past month.

8.2 Other Google services

Figure 17. Google has a broad offering. Its advanced searches and translation tools are excellent aids to information search. Google has also introduced its own browser and document management system.

Google is continually introducing new services. Some of them relate to information search, while others are online tools such as Blogger, which allows you to create your own blog. A list of all Google search tools and services is available at http://www.google.com/intl/en/options/. Some of these, which also relate to the management assistant's needs, are briefly discussed below.

8.2.1 Google Alerts

The Alerts function allows you to automatically monitor online content. For example, you can choose to receive an automatic e-mail alert whenever specific information about your organisation appears on the web. You can limit alerts to the following:

- news
- websites
- blogs

- videos
- discussion group messages
- all of the above.

You can access the service at http://www.google.com/alerts?hl=en or through Google's comprehensive list of services at http://www.google.com/intl/en/options/.

When using the Alerts service, it is worthwhile to remember a few key points. If you enter a search query that is too general, you will receive a massive amount of alerts and your mailbox will be congested with messages. That is why you should make your search query as specific as possible. The term "Nokia", for example, will fill up your inbox in an instant because web content on Nokia (the city, mobile phones) is continually produced on the web. You can limit your search like this: Nokia GSM "new models". This query will also produce lots of results, but their number will be substantially lower. It is also good to direct any alerts to a separate e-mail address.

8.2.2 Google Chrome

If you want to use Google's own browser, it is nowadays also possible. Google Chrome (see figure 18) has a lighter structure than most popular browsers and that is why it makes surfing easier.

Figure 18. Google Chrome is a web browser launched by Google in autumn 2008. It is faster and has a lighter structure than Internet Explorer or Mozilla Firefox, for example. The browser requires Windows XP or Vista.

When you open the browser, you will immediately see which pages you have recently visited. You can also search your own browser history and instantly access your favourite pages on the upper right hand corner of the page.

The browser's address bar is also a search box: when you write a search query in the box and press enter, the browser will complete a standard Google search. If you don't want Google Chrome to save your browsing history, you can do so by opening an *incognito window*. This is done by clicking on the relevant icon on the upper right hand side of the window

and selecting *new incognito window*.

Google Chrome saves windows that you have recently closed in case you want to return to them. Your favourites will be displayed whenever you open a *new window*. A new window is displayed whenever you click on the icon and choose *new window*.

8.2.3 Google Maps

The management assistant often needs to access maps, driving instructions etc., and Google Maps is an excellent tool for this. The service is available at http://maps.google.com.

Google Maps covers:

- a street map based on search by address
- a route service
- company search.

The business search function covers service providers in major cities: you can locate for your boss Indian restaurants in the vicinity of a specific address, for example.

Figure 19. Google Maps locates a street address practically anywhere in the world.

Google Maps also displays photos in the vicinity of a given address. You can also access services ratings provided by users.

Other maps services available on the web are discussed on pages 83–85.

8.2.4 Patent Search

Google's Patent Search allows you to search for patents approved in the U.S. The service covers more than 7 million patents.

8.2.5 Product Search

The web offers several product search engines, one of which is Google Product. You can use it to find online stores that sell a product and at what price. The search covers online stores in the U.S.

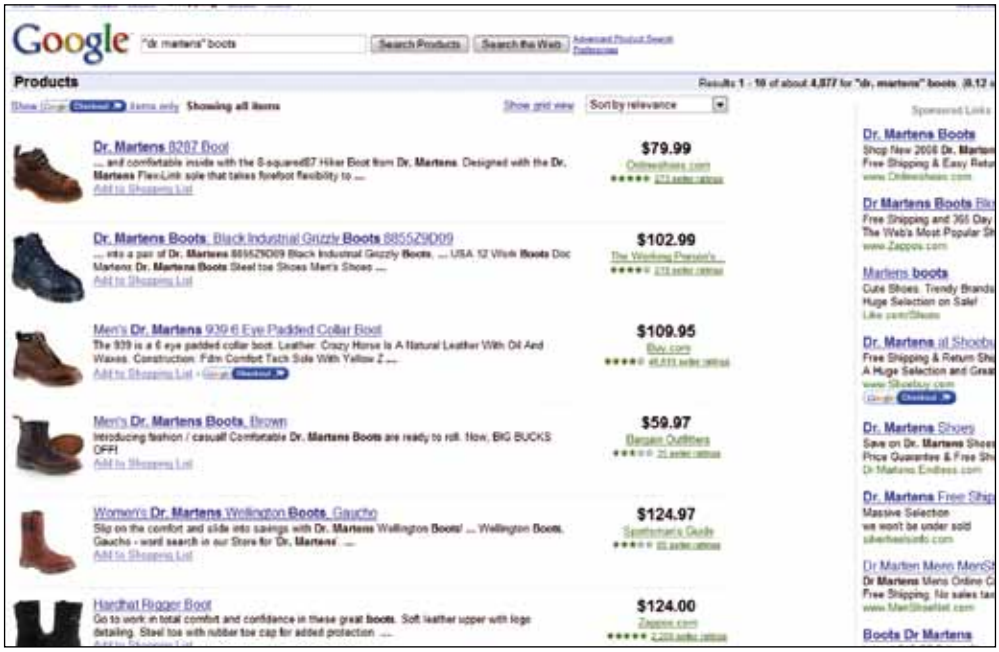

Figure 20. Google Product allows you to compare prices between online stores. Shown here are the Dr Martens offerings of different online stores. Prices can vary to a great extent.

9
Metasearches

Search engines usually use search robots to collect information from the web into the engine's own database. As a result, your search covers engine's own database, not the web. This is how most search engines operate, e.g. Google, MSN, Ask and Alta Vista.

Metasearch engines differ in that they do not have their own database, but use the databases of other search engines. A metasearch engine simultaneously covers the databases of several different search engines and subdirectories, making your search result more comprehensive.

Popular metasearch engines include the following:

- Dogpile http://www.dogpile.com
- Clusty http://www.clusty.com
- Mamma http://www.mamma.com
- Ixquick http://www.ixquick.com.

One of the advantages of a metasearch engine is that it is easier to browse the hits produced. In cases where Google or some other search engine would provide thousands or millions of hits, a metasearch engine uses algorithms to browse through different search engines and directories and displays only the most relevant results. The search result is usually reduced anywhere from tens of hits to a couple of hundred. This makes it significantly easier to browse through the search results.

Some metasearch engines also cluster the search result. This means that the search results are automatically classified by topic (see pp. 63–64). Two slightly different metasearch engines are briefly described below, namely Clusty and Dogpile.

9.1 Dogpile

Dogpile has the advantage that it is almost the only metasearch engine on the web that also uses Google. The other engines it uses include Yahoo, MSN and Ask.

Figure 21. Dogpile's homepage is at address http://www.dogpile.com.

Dogpile is a versatile metasearch engine that enables several kinds of searches: These are:

- web (word search)
- images
- audio
- video
- news
- yellow pages (contact info for companies in the U.S.)
- white pages (contact info for private individuals in the U.S.).

Dogpile offers advanced search options, which can be accessed by clicking on the link on the right side of the search box (see figure 22).

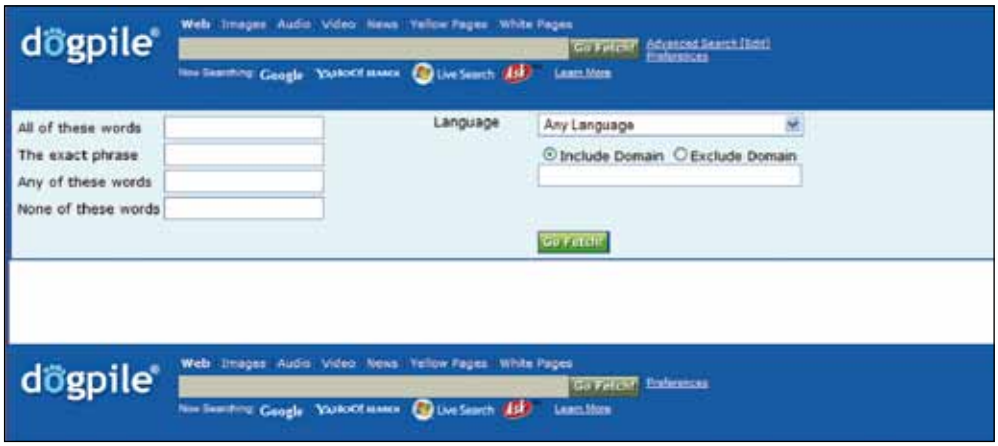

Figure 22. Dogpile's advanced search works just like Google's advanced search. You can limit your search by language or domain (e.g. haaga-helia.fi), or choose to exclude a domain.

Dogpile's news search is rather limited in scope and does not cover nearly as many items as Google. But the image, audio and video searches are worth trying!

9.2 Clusty

Clusty (http://www.clusty.com) was previously known by the name Vivisimo. It is a metasearch engine that automatically clusters search results by topic. This makes it significantly easier to browse through search results.

Figure 23. The Clusty.com homepage. Clicking on the link on the right of the search box opens the advanced search window, which allows you to formulate your query using Boolean logic (see pp. 34–36). You can also limit your search by file type (e.g. PDF) and language.

Clustering is Clusty's key advantage. Figure 24 shows how the search result is displayed in two ways.

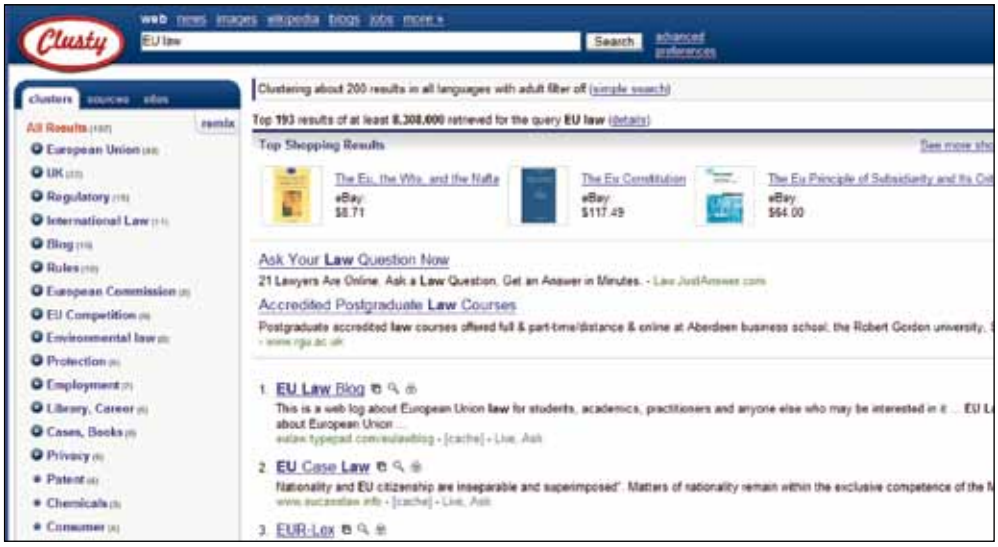

Figure 24. Clusty's search result for the query eu AND law. Displayed here are 193 results out of a total of 8.3 million pages retrieved for the query. Clusty has used algorithms to determine the best results for the user and displays only them.

At the very top of the search result is the item "Top Shopping Results", which contains a couple of sponsored results. Below this the search results for "eu AND law" are displayed in the standard fashion by relevance. The results have been clustered by topic on the left side of the page. These include environmental law, international law, patents etc.

Clusty offers possibilities other than web search. These are

- news
- images
- Wikipedia
- blogs
- jobs (open jobs in the U.S.)
- shopping (online stores in the U.S.)
- gov (.gov domain)
- labs (demo versions of Clusty's new search methods)
- customize (customise Clusty to your needs).

Clusty has the advantage that you can formulate a complete search query using Boolean operators (AND, NOT, OR) and parentheses. You need to learn the principles of Boolean logic to get the most out of Clusty.

10
Directories

Directories are often a good alternative to search engines. Directories can be general in scope or limited to special fields. The most popular directories are Librarian's Internet Index (http://www.lii.org) and Yahoo (http://dir.yahoo.com). Google, too, has its own directory, which can be accessed via the link on top of the search box at www.google.com.

Directories pool together the most relevant links on different topics, providing a quick overview of the key websites on a specified topic. Directories also include sources from the deep web, such as databases etc.

Many directories focus solely on some specific field. These include Intute (http://www.intute.ac.uk) and Suomi.fi (http://www.suomi.fi). The former is a cross-disciplinary directory administered by universities in the UK containing links for teaching and research purposes, while the latter is a public sector directory containing all key links pertaining to public administration in Finland. Suomi.fi also contains all electronic forms used by Finland's public administration, as well as info packages on a variety of topics, e.g. a guide for starting your own company, an immigrant's guide etc. The service is also available in English.

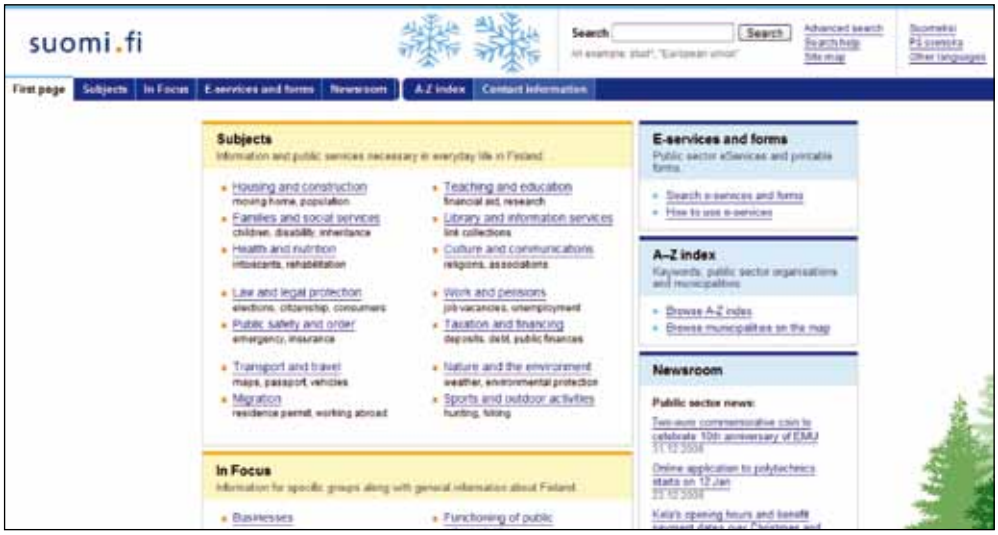

Figure 25. Suomi.fi provides a comprehensive overview of the online services provided by Finland's public authorities. The directory is often the fastest way to find information relating to Finland's public services, and also contains lots of useful information about Finland in English.

TASK: Familiarise yourself also with these directories:

LII – Librarian's Internet Index (http://www.lii.org) – a comprehensive general directory on topics relating to the U.S.

Dmoz (http://www.dmoz.org/) – one of the oldest directories on the web. U.S. content.

11
Statistical information sources

Statistics Finland is the most important producer of statistical information in Finland. The organisation publishes the Statistical Yearbook of Finland, the Official Statistics of Finland and other statistics and materials in printed format. Statistics Finland's website also contains excellent links, which can be accessed via the organisation's homepage at http://www.tilastokeskus.fi. Statistics Finland publishes plenty of information in English. The homepage in English is at http://tilastokeskus.fi/index_en.html.

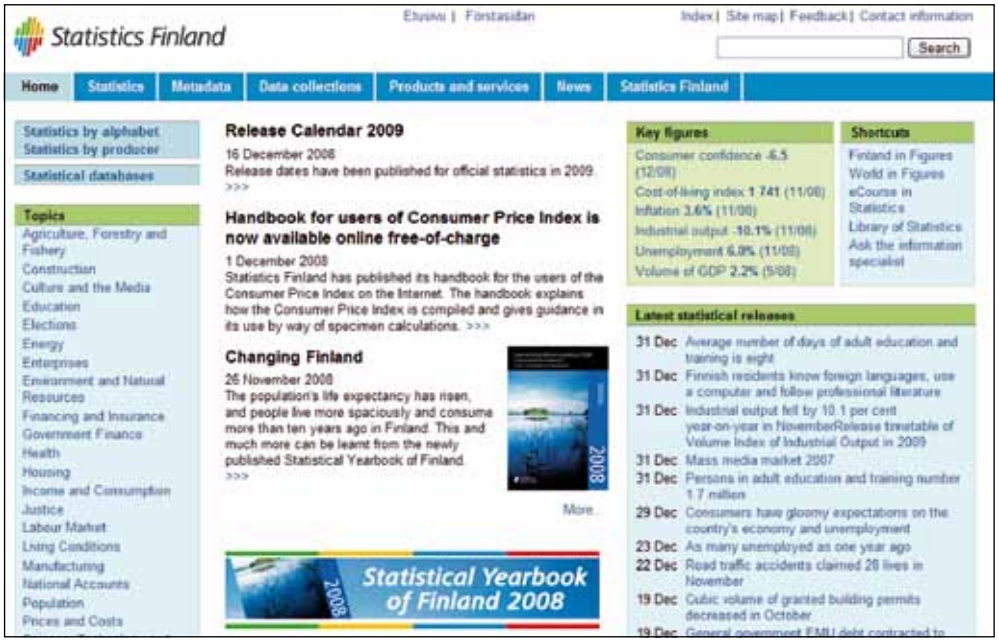

Figure 26. Statistics Finland's homepage contains plenty of statistical information on current topics. The left side of the page contains links to statistics by alphabet, producer and topic, providing quick access to relevant information. The statistical databases link takes you to databases produced by Statistics Finland, some of which are free of charge.

Statistics Finland's website is worth visiting not just for statistics, but also for its excellent links. For example, the website contains useful links to official statistical organisations in other countries (under products and services / links).

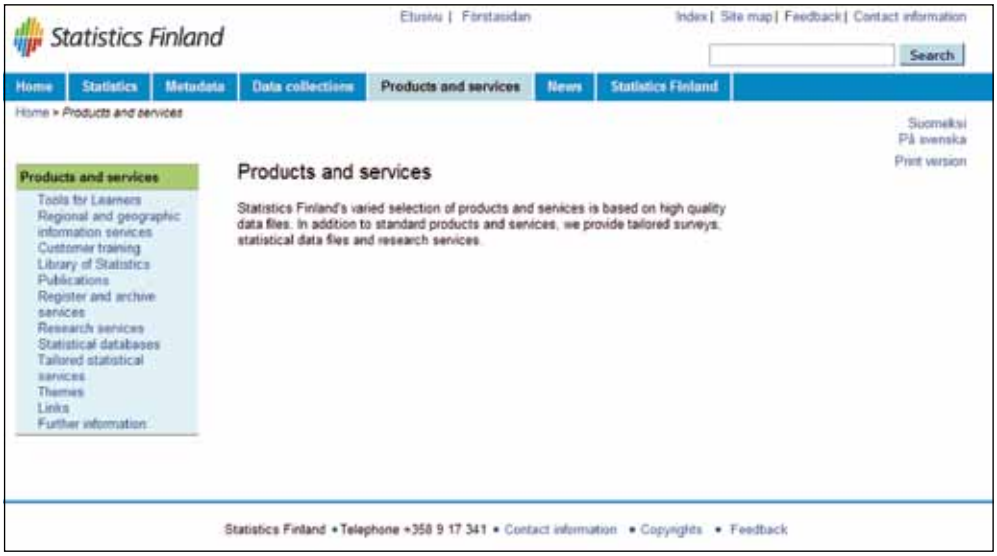

Figure 27. Statistics Finland's producers and publishers of statistics page is at address http://www.tilastokeskus.fi/tup/tilvir/index_en.html.

11.1 StatFin database

Statistics Finland's StatFin database is a free source of information on a variety of topics, for example relating to business in Finland. Using the service is easy. This is how:

1. click *statistical databases* on the homepage or go directly to http://www.tilastokeskus.fi/tup/tilastotietokannat/index_en.html
2. click *to the service*
3. your screen will look as shown in figure 28
4. click the subject area of your choice (e.g. *population*) and then choose which subcategories you wish to view
5. if you click on subcategory *births*, and then *live births by gender, mother's age and by area 1987–2008*, your screen will look as shown in figure 29
6. choose the variables (area, age of mother, year and gender) and press "Continue" the database produces the desired statistics.

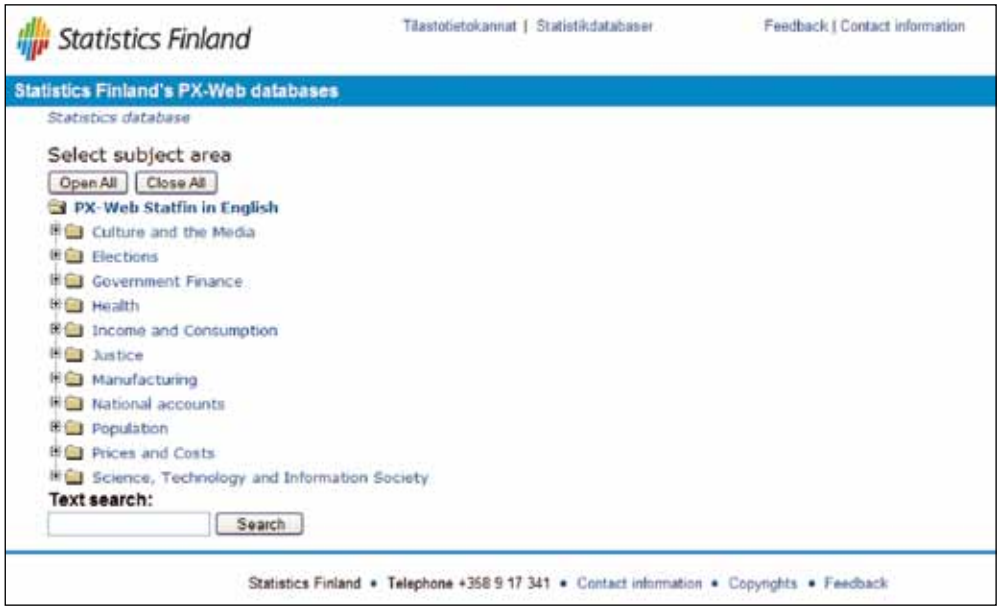

Figure 28. The StatFin database.

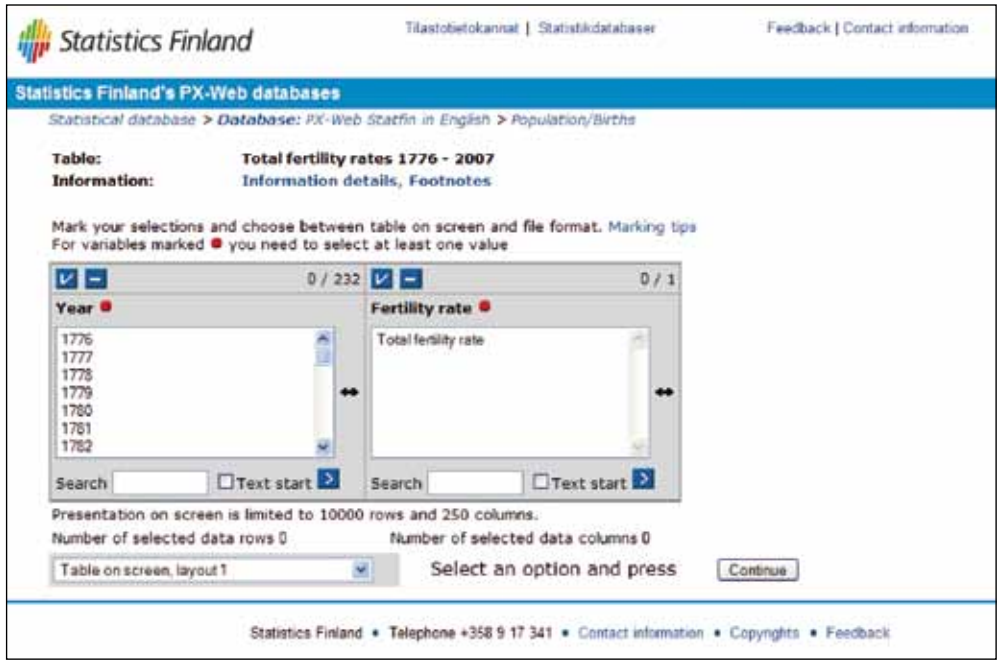

Figure 29. Statistics for live births by gender, mother's age and by area 1987 – 2008, for which you can choose the variables of your choice.

11.2 Finland in Figures and the World in Figures

Statistics Finland also offers two very useful services: Finland in Figures and the World in Figures. Finland in Figures contains key statistics on Finland, while the World in Figures contains Excel tables with plenty of useful information on different countries around the world.

Finland in Figures is a compact information package containing plenty of tables and information on key topics such as the population, economy, living conditions and culture. International comparison data is included. Finland in Figures is also available in a printed format.

The World in Figures contains Excel tables of country-specific data on all the countries of the world. The service allows you to edit the statistics to your own needs. There are 28 tables on topics including foreign trade, manufacturing, population, GDP etc. An alphabetical directory allows you to easily locate the table you are looking for.

11.3 Other producers of statistical information in Finland

Finland's official statistics producers are

Statistical authorities

- Information Centre of the Ministry of Agriculture and Forestry (Tike): statistics publication calendar
- National Institute for Health and Welfare (STAKES): statistics publication calendar
- Statistics Finland: statistics publication calendar
- Finnish Customs: statistics publication calendar for foreign trade.

Authorities that produce statistics

- Finnish Civil Aviation Authority
- Finnish Meteorological Institute
- National Institute for Health and Welfare
- Agrifood Research Finland
- National Land Survey of Finland
- Finnish Maritime Administration: publication calendar for maritime statistics
- Finnish Forest Research Institute: publication calendar for forestry statistics
- Finnish Rail Administration

- Finnish Game and Fisheries Research Institute: publication calendar for game and fisheries statistics
- Finland's Environmental Administration
- Finnish Road Administration
- Ministry of Employment and the Economy: statistics publication dates
- Financial Supervisory Authority.

Other producers of statistical information
- Finnish Centre for Pensions
- Social Insurance Institution of Finland (Kela): statistics publication calendar
- Bank of Finland: statistics publication calendar.

Producers of official statistics in Finland. Source: Statistics Finland 2008.

The materials produced by the above authorities form the basis of the Official Statistics of Finland.

You can easily access all of the key statistics producers in Finland and the rest of the world via http://www.stat.fi/tup/linkit_en.html.

There are also other important statistics producers in Finland, for example government ministries and cities. Helsinki Region Statistics (http://www.aluesarjat.fi), too, provides plenty of information Helsinki's business environment, population etc. The service includes statistics on the Uusimaa province as well as links to NORDSTAT statistics, which cover major cities in the Nordic countries.

12
Keeping up with the news

The Internet is the best media for keeping up with current events. News is published in real-time, which ensures that you can keep up with matters of interest to you. Most of the world's newspapers publish an online version and most are also free. News monitoring is also made easier by various news services and tools like RSS feeds (see p. 89).

Management assistants and secretaries are often tasked with monitoring what is written about the organisations they work for. Free services such as Google News (see p. 53) are good tools for this. It is also possible to purchase news on your organisation from various service providers. Google News is often sufficient, but if the aim is to collect information systematically, e.g. for purposes of competitor monitoring, it might be best to commission a service provider.

Is it worth the expense to pay for a news service? Yes and no. If a company wants access to systematically collected information about itself and its field of business, then using a fee-based service might be the right thing. If the goal is simply to keep up with the daily news, then freely available news services and RSS feeds should be sufficient.

Ampparit.com (http://www.ampparit.com) is a Finnish news service that is continually updated. The service monitors almost 200 online newspapers, news services and similar sources in Finland. This includes both the publications of major media houses as well as smaller organisations. The service allows you to view the latest news or to choose a topic that interests you (e.g. business, IT, media etc.).

Ampparit allows you to order RSS feeds (see. p. 89). The feeds can cover the latest news or a topic of your choice (e.g. business, football, etc.). Ampparit's other services include a blog, TV guide and weather reports for different parts of Finland. The service does not have an archive, and therefore it is suited essentially for keeping up with the daily news.

Google News and Google Finance (see pp. 53–55) are good for monitoring international news.

13
Databases

13.1 What is a database?

The significance of databases has grown exponentially during the past fifteen years. It was only in the 1990s that most electronic databases were still offline, saved on CD-ROM's or similar devices. Today almost all databases are online.

Lylykorpi (1990) has defined a database as follows:

> "A database is a collection of data describing an object, is updated by one or several information systems, and consists of records or files."

Databases consist of files, and files consist of records. Files can be organised in several ways, for example into row files or inverted files. A record is a file or data set that describes an object or the relationships between objects. A record can also comprise the object described, for example an article. (cf. e.g. Alaterä & Halttunen 2002; Haasio 2005a.)

13.2 Kinds of databases

Databases can be classified in several ways. From the user's point of view, a key question is whether the database can be used free of charge, on the basis of which databases can be divided into those that are free and those that are fee-based. Some databases, however, are partly free and partly fee-based. For example, an article database might offer bibliographical information and abstracts free of charge, but charge a fee for reading the full text.

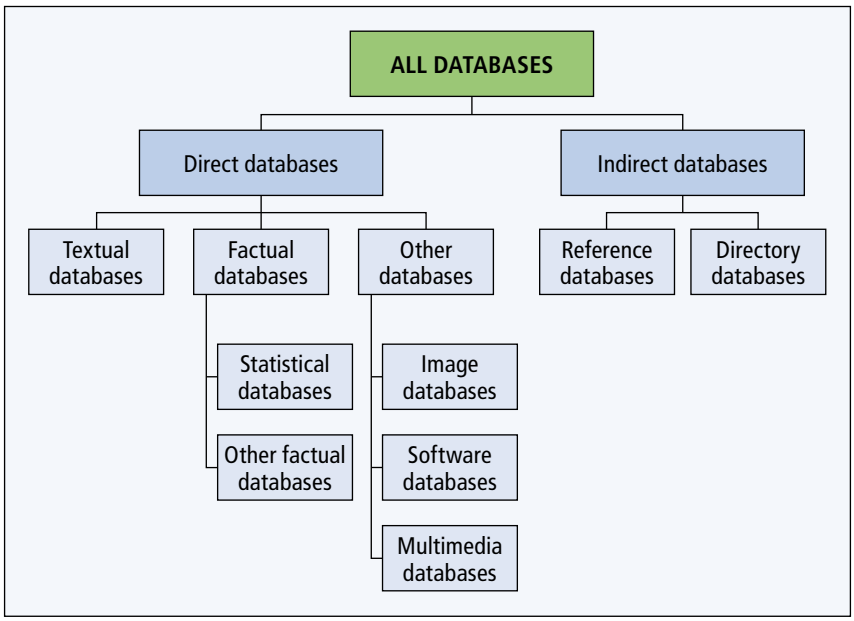

Figure 30. Databases can be grouped into "direct" and "indirect" databases. Source: Alaterä, A. & Halttunen, K. 2002, 18.

Databases can also be grouped according to their content (see figure 30). For example, they can be divided into two main groups: direct databases and indirect databases. Direct databases contain the needed information in full, e.g. an article, statistic or image. Indirect databases lead us to the needed information. For example, Statistics Finland's StatFin database is a direct database, while Helsinki public libraries' HelMet database is an indirect database. The StatFin database contains the information in full (e.g. voting turnout in municipal elections), while the HelMet database does not provide the library materials as such, but only the bibliographical information on the material you are looking for.

13.3 Where to find databases?

Depending on their size and resources, organisations usually acquire databases for employee use. Company directories are a typical example. Large companies, which have their own information service units and substantial research activities, usually acquire a number of key databases. Smaller companies often do not have resources for this. There are plenty of free databases available on the net, however, and their quality is usually excellent. Make the most of them!

Locating databases that are free often requires some effort. Although search engines cannot locate database contents because they are in the deep web (see p. 39), they can nevertheless locate the database itself based on a standard query. For example, the query "database AND eu" will generate links to databases on EU topics. Directories are also a good place to look for databases on specific topics.

Research libraries, too, have extensive database collections. Many of these are fee-based, but there are free ones as well. The best overview of the databases available through Finland's universities and other institutes of higher education is provided by the Nelli portal (http://www.nelliportaali.fi).

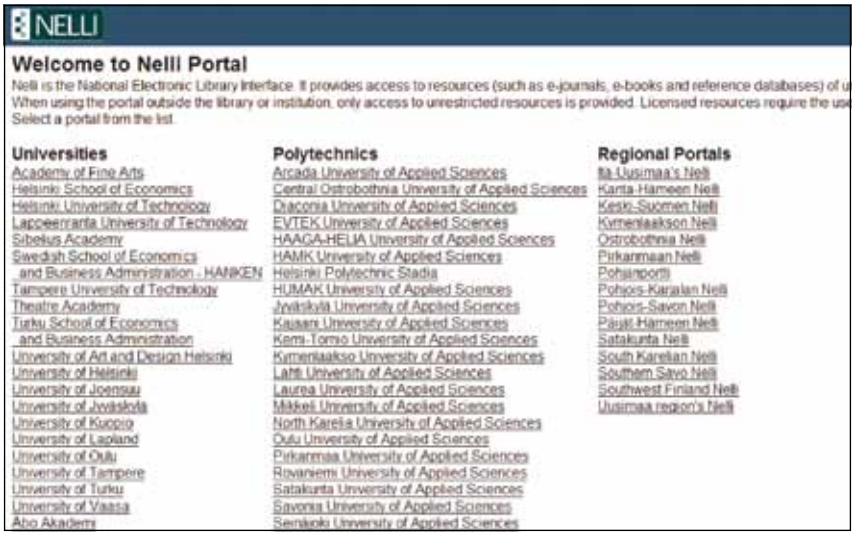

Figure 31. Nelli portal's homepage is at address http://www.nelliportaali.fi. It is an excellent source when looking for electronic materials available in Finland, e.g. e-books, e-magazines, databases etc.

The web also contains directories specialising in deep web content, e.g. Complete Planet (http://www.completeplanet.com). The directory is almost completely limited to U.S. content, but is still worth visiting because it can lead you to very interesting databases.

13.4 Evaluating the quality of a database

Databases vary greatly in quality. Nevertheless, it can be said that the information contained in a database is more reliable than the information on a webpage on average. Before using a database, it is important that you

familiarise yourself with its characteristics and data collection principles. If your company is about to acquire a fee-based database, for example, it is good practice to analyse the service thoroughly and consider what alternatives are on offer. Should we pay for the service or is the information freely available elsewhere? Do we need the database often enough to justify the expense, or are free sources be sufficient?

Various methods have been developed for the evaluation of databases. When evaluating a database, you should always take into account the basic facts, for example the following:

1. Who has produced the database?
2. What is its coverage, i.e. what publications or similar does it contain?
3. How often is it updated?
4. How easy is it to use?
5. What search features does it offer?

Before acquiring a database for your company, it is good to familiarise yourself with the alternatives available on the market and think carefully about how much the database is needed in practice. It is often the case that freely available sources are sufficient.

13.5 Useful databases on different fields that are freely available

Fennica, i.e. the National Bibliography of Finland, contains bibliographical information on all books, magazines and maps published in Finland. It also covers audio-visual and electronic publications in Finland, as well as non-Finnish publications that have a Finnish author or that relate to Finland. Fennica also contains information on literature soon to be published. Fennica is administered by the National Library of Finland and can be used free of charge at address http://fennica.linneanet.fi/webvoy.htm. The service is also available in Swedish and English.

Figure 32. Fennica's basic search. Advanced search is also possible.

Fennica is useful when you want to find literature on a specific topic, for example. By completing a keyword or subject search, your search result will cover all items published in Finland relating to the keyword or subject. Similarly, you can search for all publications written by a specific author etc.

The National Library of Finland also administers the ARTO database (http://arto.linneanet.fi), which contains information on about 700 periodicals in Finland. *ARTO is subject to a charge. You can use it for EUR 1.60 per hour by sending a text message to the number provided on ARTO's homepage, after which you can access ARTO immediately. ARTO is also available in Swedish and English.*

ARTO offers a quick way to locate articles published in Finland's magazines and periodicals. There are plenty of search options. You can search by keyword, author, title of article etc. ARTO does not cover Finnish newspapers. It is primarily a bibliographical database, but the full text is also available for the newest articles. ARTO also contains occasional references to articles in monographs.

Companies and organisations can order ARTO by licence agreement, but purchasing time via text message is smart when the need for ARTO is only occasional. It is worth noting that ARTO is available in most libraries free of charge.

ARTO's basic search can be completed by:

- subject (keyword)
- subject (browse)
- keyword
- author
- title of article
- publication name
- ISBN
- ISSN/other standard code
- UDK
- classification
- command (and/or/not).

Search in Fennica can be completed by:

- keyword
- author
- title
- subject
- journal/serial title
- ISSN
- ISBN
- classification
- command (and/or/not)
- call number.

The search options are nearly identical – the differences derive from the fact that the former focuses on articles and the latter on monographs. For this reason, you will usually search Fennica using the book title or ISBN (International Standard Book Number), and ARTO using the article title or ISSN (International Standard Serial Number).

14
Creative commons – freely usable online sources

Because all material on the web is subject to copyright, you cannot use any images or other material without the author's permission, unless otherwise stated on the website. In corporate life, you also need to note that some materials, although otherwise freely usable, cannot be used for commercial purposes. You must verify this before using any online content of in-house materials, for example.

Some people produce material for the web with a Creative Commons (CC) license, allowing others to reuse and remix the material freely, sometimes also commercially.

You can search for content governed by Creative Commons by using search engines designed for the purpose. In Google, for example, you can limit your search to content that can be freely used and edited also for commercial purposes. Two search engines focus on CC: Yahoo and Creative Commons Search (http://search.creativecommons.org/).

Educational institutes usually prefer to publish their materials under CC. This includes documents and other educational materials for use and development by others under a CC licence. Companies, too, can make use of CC in their marketing.

Figure 33. Yahoo's Creative Commons search engine (http://search.yahoo.com/cc) targets its search solely to documents with a CC licence.

Find out more about CC publishing and policy at http://creativecommons.fi/etusivu.

15 Information about different fields – key online sources for the management assistant

15.1 Company information

Management assistants and secretaries often need to seek information about companies and other organisations. Although Google offers an easy way to access vast amounts of company information, specialised directories are often faster, more convenient and, above all, more trustworthy. Some important sources of freely available company information are discussed below. There are also plenty of fee-based databases available on the market.

It is important for companies to be visible in free online search results, as this enables marketing on many levels. That is why the management assistant should regularly check how visible his or her organisation is on the net's various corporate services. At the same time, the assistant can also check that the information is correct.

You can quickly find key company information, including company names and business identity codes, on the Trade Register's website (http://www.prh.fi/en.html) and the Finnish Business Information System's homepage (http://www.ytj.fi/english/). The latter also provides quick access to the services shown in figure 34 (see also p. 85).

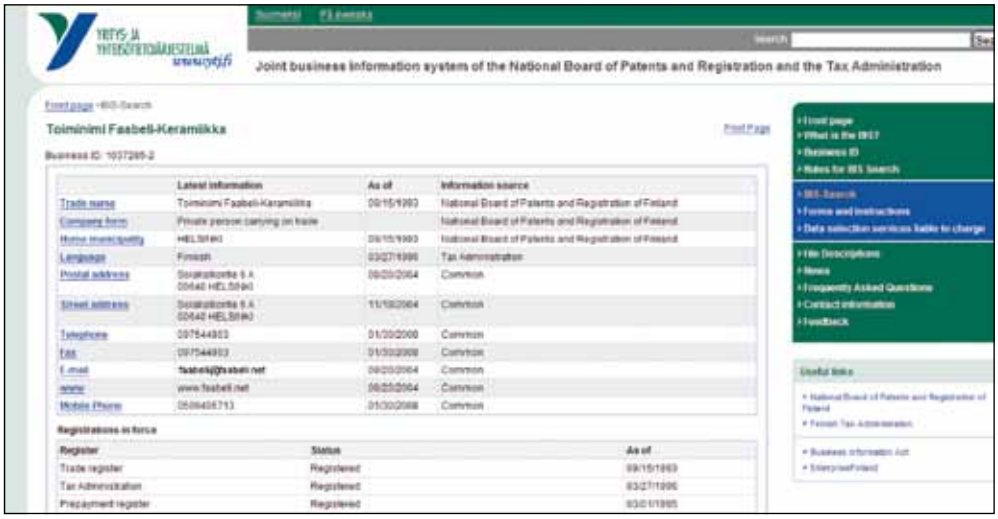

Figure 34. The Finnish Business Information System's information service can be accessed at http://www.ytj.fi/english. The service allows you to conveniently check a company's business ID, for example.

The Finnish Business Information System also stores basic information on all associations and foundations registered in Finland. Except for the official register of associations, it is basically the only directory that allows you to check the background information of associations with reliability.

Several company directories are published in Finland. These include the following:

- *Yritystele* (http://www.yritystele.fi) – basic information on Finnish companies and trademark search. Companies can also be searched by region. The service is essentially a b-to-b directory with good search possibilities, e.g. based on company name, field of business, business ID etc.
- *Eniro company search* (http://yritykset.eniro.fi/) – a versatile company directory with information on more than 200,000 Finnish companies. Also a map service. The search can also be limited by region or province!
- *Inoa* (http://www.inoa.fi/) – information on more than 200,000 companies. The fee-based version also covers risk ratings, Esmerk news, annual accounts etc.
- *Aarre* (http://www.aarre.fi/aarre/) – Information on 600,000 companies free of charge. Business reports etc. can be purchased for a small fee. The service also offers bankruptcy news and financial reports on foreign companies for a fee.
- *Keltaiset Sivut* (http://www.keltaisetsivut.fi/SksWeb/) – a traditional company directory in electronic format.

- *Kompass* (http://www.kompass.com/) – covers 2.3 million companies from 60 countries. You can search by company name or product/service category.
- *Suomen yritykset* (http://www.suomenyritykset.fi/) – a free company search service.
- *Blue Book* (http://www.bluebook.fi/fi/index.html) – traditional blue book in electronic format.
- *Yrityspalvelin* (http://helecon3.hse.fi/FI/yrityspalvelin/) – annual reports of Finland's biggest companies. Provided by the Helsinki School of Economics.

Some of the above services are also available in English.

A comprehensive source on Finnish export companies is available at http://www.finlandexports.com/. FinPro upkeeps a similar directory at address http://www.finpro.fi/fi-FI/Market+Information/Finnish+Exporter/. Both sites are available in English.

An international company information service worth mentioning is Corporate Information (http://www.corporateinformation.com/), which provides basic information on companies in many parts of the world free of charge, and also a fee-based service. Google Finance is another useful source when seeking background information about companies (see p. 54). You can also find international newspaper articles about the company through the service.

The web contains vast amount of practical company information as well as business research. Key Finnish sources in this area are the HELECON online databases (http://helecon.lib.hse.fi/EN/) of the Helsinki School of Economics. Their use requires a user agreement. Companies that need to access the service only occasionally can use it by paying a small fee (€ 10) by mobile phone, which opens access to the database for a limited amount of time.

15.2 Information about public sector services

An excellent source of information on public services is the Suomi.fi service (http://www.suomi.fi), which is also available in English (see also p. 64). The portal covers the most important sources and links relating to public services in Finland. The portal also includes a form search, which is a convenient way to access the electronic forms you need when dealing with the authorities.

The homepages of government ministries and other organisations are also important sources of public sector information. Links to them are handily available on the Suomi.fi portal.

15.3 Legislation

The government's FINLEX database (http://www.finlex.fi) is the key source of information on Finnish legislation, containing all Finnish acts and decrees in force. The service also covers earlier versions of acts and decrees, and many of them are available in English. The FINLEX service also provides translations of most Finnish acts.

15.4 Travel, maps, timetables

Making travel reservations and conference bookings are a regular aspect of the management assistant's job. The net makes these tasks easier in many ways: you can easily find timetables, order flight tickets and seek information about conferences on the net. Web galleries, for example, often provide a better impression of the venue than brochures. Travel agency services can also be easily found on the net.

Here are some key sources of information on timetables:

- Railway – http://www.vr.fi
- Finnair – http://www.finnair.fi
- Route guide for Helsinki busses and trams – http://www.reittiopas.fi
- Helsinki public transport timetables – www.ytv.fi/fin/liikenne/aikataulut/
- Finland's public transport timetables – http://www.matkahuolto.fi/fi/matkapalvelut/aikataulut/.

When making travel arrangements, it is usually best to make use of the company's designated travel agency. Travel agency website addresses are usually in the form http://www.companyname.fi. The biggest and most well known travel agencies with their own online reservation system include the following:

- *Area* – http://www.area.fi
- *Ebookers* – http://www.ebookers.fi
- *Töölön matkatoimisto* – http://www.toolo.fi.

Worth visiting is also TravelLink (http://www.travellink.fi) for affordable flights, accommodation and car rental services.

There are plenty of map services on the net covering all major cities. Most (e.g. Google Maps) also include a route service, allowing you to conveniently plan your driving route to your destination.

Excellent map services include following:

- Google Maps – http://maps.google.com
- Maporama – http://www.maporama.com
- Mapquest – http://www.mapquest.com
- Univerisity of Texas Libraries' links – http://www.lib.utexas.edu/maps/.

The following websites are useful when seeking basic information about different countries, for example about their culture and customs:

- CIA World Factbook – https://www.cia.gov/library/publications/the-world-factbook/
- Lonely Planet – http://www.lonelyplanet.com.

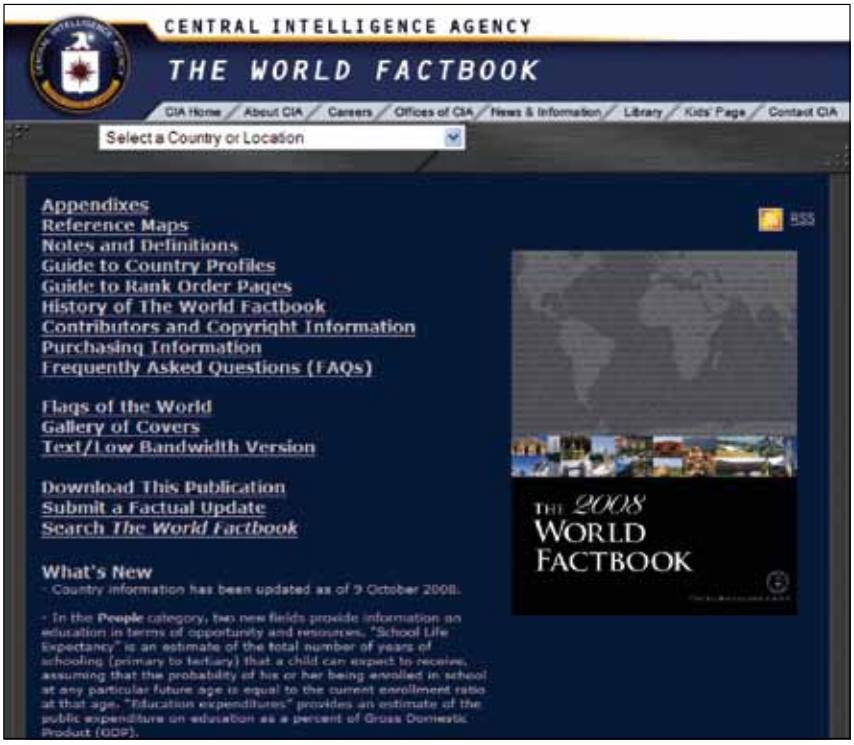

Figure 35. The World Factbook, published by the CIA, contains up-to-date information on different countries in the world. The free service is available at https://www.cia.gov/library/publications/the-world-factbook/.

The Ministry of Foreign Affairs website provides information about travel safety for Finnish citizens. Lonely Planet offers practical tips and recommendations on places all over the world. The World Factbook functions as a comprehensive information package, allowing you to check a country's GDP, population and other facts.

15.5 Competitor monitoring and patents

Competitor monitoring is an important aspect of the management assistant's job. This can be done in many ways, of which news monitoring is a good example (see p. 71). The net also offers plenty of other sources.

The National Board of Patents and Registration (http://www.prh.fi/fi/tieto_ja_tutkimuspalvelut/patenttialan_tieto_ja_tutkimuspalvelut/kilpailijaseuranta.html) is an excellent source for competitor monitoring. Their expertise can also be consulted by telephone.

The National Board of Patents and Registration upkeeps the following databases and registers:

- Register of Associations http://www.prh.fi/fi/yhdistysrekisteri.html
- Trade Register http://www.prh.fi/fi/yhdistysrekisteri.html
- Register of Foundations http://www.prh.fi/fi/saatiorekisteri.html
- Trademarks Database http://tavaramerkki.prh.fi/
- Utility Model Net http://www.prh.fi/fi/mallioikeudet/mallinetti.html
- Patent databases http://www.prh.fi/fi/patentit/julkaisut.html.

The National Board of Patents and Registration also upkeeps an excellent collection of links at http://www.prh.fi/fi/kaupparekisteri/linkit.html. Some of the services are available in English.

The Employment and Economic Development Office (http://mol.fi/mol/en/index.jsp) upkeeps a comprehensive list of job vacancies, among other services. An easy way to keep up with new hires and appointments in competitor companies is to follow key business media.

15.6 Dictionaries, translation tools and style guides

The University of Vaasa Library's Terminology Online is a comprehensive collection of dictionaries, all of which can be accessed free of charge. The service is available at address http://lipas.uwasa.fi/comm/termino/collect/.

There are plenty of fee-based dictionaries on the net. They usually are of slightly better quality than free dictionaries. The EU's termbank Eurodicautom (http://iate.europa.eu/) is a good tool also used by EU's translators. A list of free online dictionaries is available at http://www.eniro.fi/lo/hakukoneet/sanakirjat/.

The net contains many useful translation tools in addition to Google Translator (see pp. 46–48). Although they are no match to a human translation, they are still worth visiting because they allow you to get a good understanding of what is said on a foreign company's website, for example. The language selections are varied, extending all the way from Chinese and Dutch to French and Arabic. Alta Vista's translator (http://fi.babelfish.yahoo.com/) is a good example.

15.7 EU information

The European Union publishes all of the documents it produces on the net. This includes all acts, decrees and parliamentary material. Most documents are published in all official EU languages.

EUR-Lex (http://eur-lex.europa.eu/en/index.htm) provides direct access to EU law. This covers treaties, legislation, case law and legislative proposals.

Figure 36. The EU's EUR-Lex portal is at address http://eur-lex.europa.eu/en/index.htm.

EUR-Lex is worth regular visits because its frontpage (see figure 36) contains a news section on the latest legislative developments. EUR-Lex also contains questions presented by MPs. Searching EUR-Lex is easy because you can easily limit your search e.g. by keyword, document number etc. You can also target your search to legislative collections such as primarily legislation or judicial practice.

Your Europe is a popular EU portal containing lots of relevant EU information for companies and citizens alike (http://ec.europa.eu/youreurope/index_en.html). The portal is an excellent place to start when seeking EU-related information for your company. The portal provides all of the most relevant facts on public administration, financing opportunities, EU corporate services etc. The EU homepage is at address http://europa.eu.int/.

15.8 Scientific information

Although the management assistant's information needs are generally limited to practical matters, business, law and similar topics, the need might sometimes arise to access scientific articles to support decision making, and especially product development and research.

Companies usually do not have access to university databases. The net, however, contains several excellent directories and search services devoted to scientific information.

Intute (http://www.intute.ac.uk) is a topical directory of scientific information maintained by UK institutes of higher education The service covers only websites that the universities and colleges consider to be of sufficiently high quality for teaching and research needs. Intute covers all disciplines from business and law to medicine and the humanities. The site also contains excellent learning material on the use of online sources. It can be found by clicking on the *training suite* link.

Google Scholar (see pp. 50–52) and Ingentaconnect are excellent search engines for locating scientific articles on a variety of topics. These search engines target their search solely to scientific articles on the net, and no other websites. Both engines allow you to read the abstracts of articles for free, and also some full texts. The University of Lund DOAJ directory (http://www.doaj.org) provides free access to articles published in scientific and scholarly journals with an Open Access licence.

16
Use of web 2.0 in working life

In 2004, Tim O'Reilly introduced the concept of Web 2.0, which refers to the second generation of web development and web design: the interactive and social web. As noted by Hintikka (2007), Web 2.0 is not one but many: it is an umbrella of online services that share the dimensions of community and interaction.

The cornerstones of the social web are:

- information sharing
- the changing role of information users: information users are now also information producers
- the social production of information
- emphasis on collective intelligence
- emphasis on open source thinking.

According to Web 2.0 philosophy, knowledge is no longer someone's proprietary right, but meant to be shared – and what's best – for free! A key aspect of this is the development and use of open source software etc. Users of online services are simultaneously their developers! Indeed, platforms and software based on open code are increasingly common in business life: e.g. the Moodle learning environment. True, the products of Microsoft and other global software houses are dominant, but the use of open source solutions can be highly useful especially for small- to medium-sized companies.

Important aspects of Web 2.0 include the following:

- RSS feeds
- blogs
- wikis
- mashups
- sharing personal content
- long tailing
- collective intelligence
- implementation of PC applications on www-platforms
- collective production and development.

RSS is an acronym for Rich Site Summary or Really Simple Syndication, and refers to the receipt of continually updating feeds from a website. By ordering an RSS feed, you will be automatically informed of any website updates in your browser, bookmarks or a separate feed page. Typical RSS services are news feeds, blog feeds and organisational feeds. The City of Jyväskylä, for example, uses RSS feeds in its communications: partners and citizens can keep abreast of news developments and the decision-making process. Companies, too, can use RSS feeds to inform stakeholders about important company events, for example staff changes or product innovations. RSS feeds have the potential to provide excellent support for marketing and communications. For example, if your job profile includes keeping abreast of news in some specific area or releases by competitors, you can do so conveniently by ordering an RSS feed. You will no longer need to visit different sites separately because the relevant news will automatically arrive on your computer.

A mashup is a webpage or application that combines content from two or more sources to create a new service. For example, the cartographic information of Google Maps has been combined with business address information, with the result that you can choose an address on the map and check what services, such as restaurants, banks, hotels etc, are in the vicinity. The cartographic information has been better utilised, creating added value. (Haasio & Haasio 2008.)

Web 2.0 also plays a key role in business life. Kari A. Hintikka (2007) has noted that "Web 2.0 is a new way of thinking in Internet marketing, production as well as strategy." Even though the social web is based on the free distribution of information, companies and other organisations can also utilise it in their activities. Blogs are a good example of this.

Skype is an excellent example of how open software can be utilised in business environments. More and more companies and organisations are taking Skype into use. And this is not surprising, given that it enables free communication via voice and images throughout the world. Companies can use Skype to organise meetings between business units in a cost-efficient way. Similar commercial applications include ConnectPro, which is used by many educational institutes.

Web 2.0 applications are already quite common in the business world. These range from blogs to product development based on Web 2.0 thinking and tools. Lego, for example, has provided its customers with the opportunity to participate in the design of its products over the net. In similar fashion, many companies are making use of long tailing to provide their customers with broader product selections than otherwise available in their retail outlets.

Read more about Web 2.0 at http://tim.oreilly.com/.

17
Informal sources

Information gathering is a complex process. It is collected via different channels and sources in a rich variety of situations. In many cases, *informal channels* are an important source of information. We often turn to our colleagues, experts or friends for assistance. It is often easier simply to ask a colleague in the next room than to start searching information networks or other sources.

Besides friends and colleagues, typical informal information sources are experts and authorities.

A distinct characteristic of informal sources is that the information is usually communicated verbally with no documentation left behind.

In their classic study, Chen and Hernon (1982) emphasised the significance of personal contact in both professional and non-professional information seeking. The observations of several research studies support their claim. What is interesting in the findings is that we do not necessarily seek help from persons who are "the most qualified" or "have more expertise", but rather approach persons from whom we have received good answers and with whom it is easy to communicate. In other words, interaction plays a crucial role in the use of informal sources. Communication is crucially important to the management assistant also from the information seeking point of view.

Information seeking is often governed by the "principle of least effort". This means we tend to seek information from where it is most easily obtained, which makes sense especially in working life, and also explains why informal sources are so popular. We get information quickly from our colleagues and do not need to spend time in information search. It should be noted, however, that "the principle of least effort" does have its dangers. Information that is the easiest to obtain is not necessarily the most reliable information, whether obtained from sources informal or formal!

The use of informal sources is often justified when we are dealing with routine tasks. Using informal sources also contributes to the exchange of tacit information, for example relating to work processes or operating practices, which is important for organisations. Tacit information is

usually not documented and is transferred from one person to the next. Someone in the organisation may have substantial expertise on the issue we are interested in, and in such cases, it is natural to make use of his or her expertise.

18
Books and periodicals

The book is alive and well. Rumours about its death are total exaggeration. The same holds true for magazines and newspapers. Although information is increasingly available in electronic format, magazines, professional journals as well as reference works remain important sources of information for companies and other organisations.

Books can be divided into four main groups, which are:

- monographs
- collected works
- reference books
- bibliographies.

Haasio (2005b) defines the monograph as follows: monographs are such manuscripts that are not of a series and consist of one volume or several volumes. They differ from periodicals and other publication series in that they are not published in an ongoing series. Collected works contain articles by different authors, for example. Reference books are publications such as dictionaries and encyclopaedias. Bibliographies are "books on books", i.e. they list all books or documents relevant to a subject or author. Reference works are especially important to the management assistant and secretary: dictionaries, company directories etc. are everyday tools. Even though different kinds of glossaries and dictionaries are easily available on the net (see. pp. 85–86), printed reference works remain a handy source of information.

The book, too, is often a good source of information for the management assistant. A basic hand library, consisting of dictionaries, reference works etc, is worth acquiring, as are key publications relevant to the company's field of business. A vast amount of information is easily available on the net, but this offering is often not sufficient. Indeed, when seeking deeper insight into an industry or topic, it is often the case that good sources are not available on the net.

19
Libraries

The significance of libraries as an information source for companies and other organisations should not be underestimated. A company's own library, and also public and research libraries, is often very useful information channels.

The history of the library can be traced back three thousand years to Assyria, where King Ashurbanipal (669–627 B.C.) had a library consisting of 25,000 clay tablets. The library had a catalogued collection and also a librarian in charge. China and Egypt, too, had early libraries, serving priesthood and kings.

The library has often been described as the collective memory of humankind. It is not only a repository of culture and science, but also an ever-evolving institution serving citizens and their information needs.

Libraries have the key task of providing information resources for citizens' use. This covers both *reference resources* and *information resources*. The former includes databases, bibliographies etc., while the latter covers the actual bearers of information, e.g. magazine articles, books etc. *Library classification systems* ensure that the desired information is easy to locate. The classification systems used in Finland are PLC (public libraries) and UDC (research libraries).

Libraries have the task of promoting the democratic dissemination of information. All citizens must have equal access to information sources regardless of their age, sex, race, wealth etc.

In addition to citizens, libraries serve organisations by providing up-to-date information and assistance, with the result that complex information searches can be successfully completed, e.g. for research purposes.

19.1 Libraries in Finland

Finland has about a thousand public libraries, tens of scientific libraries as well as university libraries, company libraries and special libraries. The most important of these is the National Library of Finland, which is located in Helsinki. Its role has been defined as follows:

"The National Library serves as a national service and development centre for the library sector and promotes national and international cooperation in the field. It is responsible for the collection, description, preservation and accessibility of Finland's printed national heritage and the unique collections under its care."

Libraries are often divided into academic, public, private and special libraries. Academic libraries are the libraries of universities and other institutes of higher education. Finland's public libraries, i.e. the city and municipal libraries, are governed by the Library Act and Library Decree of 1998. They define the key tasks of public libraries.

Section 2 of the Library Act defines the tasks of public libraries as follows:

"The objective of the library and information services provided by public libraries is to promote equal opportunities among citizens for personal cultivation, for literary and cultural pursuits, for continuous development of knowledge, personal skills and civic skills, for internationalisation, and for lifelong learning."

"Library activities also aim at promoting the development of virtual and interactive network services and their educational and cultural contents."

The Library Act emphasises the role of the library network in the democratisation of knowledge. It is the task of libraries to ensure that all citizens have equal access to information sources. A key aspect of this is that library services are free of charge.

Helsinki City Library is the central public library. There are also 20 provincial libraries, which have the task of coordinating and developing library activities in their respective areas. Finland's provincial libraries are located in the following cities:

- Espoo
- Hämeenlinna
- Joensuu
- Jyväskylä
- Kajaani
- Kokkola
- Kouvola
- Kuopio

- Lahti
- Lappi
- Lappeenranta
- Mariehamn
- Mikkeli
- Oulu
- Pori
- Porvoo
- Seinäjoki
- Tampere
- Turku
- Vaasa.

Public libraries are an excellent source of information especially for small- to medium-sized businesses, for example with regard to law, business etc. Public libraries also operate an interlibrary loan service, through which it is possible to order materials from research and academic libraries, for example. Especially in more remote areas, the municipal libraries serve the needs of private individuals and entrepreneurs in many ways.

19.2 Research libraries

There are about a thousand research libraries in Finland. The National Library is a so-called "free-copy library", from where in principle you will find all books, magazines, ephemera etc. published in Finland. Some university libraries also have the right to receive a free copy. Printers are by law required to provide free-copy libraries with a free copy of all printed materials published or distributed in Finland. The right to a free copy therefore covers other materials than just books. The Helsinki University Library houses the broadest free-copy collection. Other libraries focus on building collections in their own specific area of expertise (e.g. the Library of Statistics collects literature relating to statistics etc.) The following libraries have the right to a free copy in the fields indicated:

- Library of Parliament: law and political science
- Helsinki School of Economics Library: economics, business and finance
- Helsinki University Library: humanities
- Helsinki University Viikki Science Library: forestry
- Jyväskylä University Library: pedagogy, psychology, sports
- Tampere University Library: social sciences and communications

- Helsinki University of Technology (Espoo): engineering and natural sciences
- National Library of Health Sciences (Helsinki): medicine, health sciences
- Library of Statistics (Helsinki): statistics.

Each university has its own library. These include:

- Helsinki School of Economics Library
- Helsinki University Library – National Library of Finland
- Joensuu University Library
- Jyväskylä University Library
- Kuopio University Library
- Finnish Academy of Fine Arts Library
- Lahti Science Library
- Lappi University Library
- Lappeenranta University of Technology Library
- National Defence University Library
- Oulu University Library
- Sibelius Academy Library
- Swedish School of Economics Library
- University of Art and Design Library
- Tampere University of Technology Library
- Tampere University Library
- Theatre Academy Helsinki Library
- Helsinki University of Technology Library
- Turku School of Economics Library
- Turku University Library
- Tritonia Academic Library (Vaasa)
- Åbo Akademi University Library.

The libraries of Finland's universities of applied sciences, too, have become important information sources. They maintain extensive collections in their respective areas of expertise, and therefore play an important role especially in smaller towns.

The libraries of Finland's universities of applied sciences are listed below (they also have branch libraries in other locations):

- Arcada University of Applied Sciences Library
- Diakonia University of Applied Sciences Library
- Helsinki Metropolia University of Applied Sciences Library
- Saimaa University of Applied Sciences Library
- HAAGA-HELIA University of Applied Sciences Library

- HUMAK University of Applied Sciences Library
- HAMK University of Applied Sciences Library
- JAMK University of Applied Sciences Library
- Kajaani University of Applied Sciences Library
- Kemi-Tornio University of Applied Sciences Library
- Central Ostrobothnia University of Applied Sciences Library
- Kymeenlaakso University of Applied Sciences Library
- Laurea University of Applied Sciences Library
- Mikkeli University of Applied Sciences Library
- Oulu University of Applied Sciences Library
- Pirkanmaa University of Applied Sciences Library
- North Karelia University of Applied Sciences Library
- Police College of Finland Library
- Lahti Region Educational Consortium Library
- Rovaniemi University of Applied Sciences Library
- Satakunta University of Applied Sciences Library
- Savonia University of Applied Sciences Library
- Seinäjoki University of Applied Sciences Library
- Novia University of Applied Sciences Library.

Remember that Finland's research libraries are open for everyone. You can visit them to borrow material and complete searches from different databases, for example. The same applies to university libraries – they are not only for students and staff!

19.3 Company libraries

The library is a key information resource in Finnish society. Companies and public sector organisations also make active use of libraries. Many companies and organisations have their own in-house information service, in connection with which a library also often resides. All ministries, too, have a library primarily to fulfil the information needs of staff. Library and information services play a key role especially in large companies engaging in research, e.g. media houses and pharmaceutical companies.

Company libraries, above all, have the role of supporting the company business from a strategic point of view, which often involves research and development. This role should be taken into account in all decisions concerning the library, for example in the procurement of materials. The library collection should cover literature that provides comprehensive and versatile support for the company's business operations and research

and development activities. The same applies to magazine and journal subscriptions, as well as databases.

The libraries and information services of larger companies are managed by information specialists, who have received extensive education in the field. In smaller companies, these tasks are often part-time positions, and can also be the management assistant's or secretary's responsibility.

Today's company library is much more than just an information bank containing books and periodicals. Company libraries are tasked especially with the following:

1. information monitoring in areas central to the company's strategy
2. supporting strategic success by forwarding, saving and utilising information in diverse formats.

Company libraries are increasingly comprehensive information services. They increasingly utilise the latest information resources, such as information networks and databases, in addition to traditional printed media. It should be noted, however, that even though electronic materials are increasingly significant, traditional sources (books, periodicals etc.) continue to play an important role.

19.4 Finding information in libraries

Libraries use either the Public Library Classification (PLC) or Universal Decimal Classification (UDC) systems. PLC is used by Finland's public libraries, and UDC by research libraries. The classification tells us where on the shelf the item we are looking for resides.

Libraries use keywords to direct the information seeker to the relevant source. Keywords describe the content of the material and are generally based on some predefined index, for example the keyword index YSA (*Yleinen suomalainen asiasanasto*). A keyword can also be a proper noun, e.g. the name of an author or country.

All library items are tagged with keywords that describe the item's content. This allows you to use keywords to search the library's collection.

Library collection databases contain bibliographical information of all items in the library, including document descriptions and location information. Most databases allow you to search by title, author, subject or keyword. If you search by keyword, you can use any words that you think describe the content you are looking for, and if you search by subject, you can only use those terms that are included in the subject index (e.g.

YSA - yleinen suomalainen asiasanasto). Depending on the database, you can often also limit your search by additional means, e.g. by language or type (book, magazine, article etc.).

Materials in company libraries should also be tagged with keywords and classified in the standard way. This ensures that relevant information can be easily found.

If you are looking for rarer material in Finnish libraries, the Frank database is an excellent tool. Frank covers all public, research and special libraries in Finland and can be accessed at http://monihaku.kirjastot.fi/.

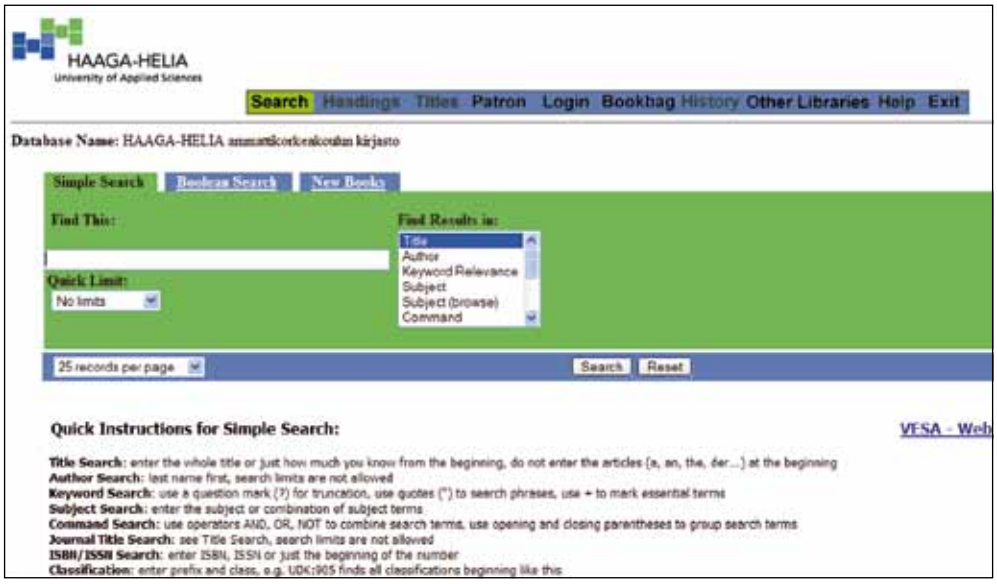

Figure 37. HAAGA-HELIA library's HALTIA database search interface. HALTIA offers versatile search options as the interface corresponds to that of the National Library.

20
Archives

The word "archive" means several things. Firstly, an archive can be a collection of documents or records, e.g. the Jämsä Police District Archive. In such a case, the documents or records have been collected into an archive by an archiving party. The archiving party can be a public or private entity, for example a government office or private association, which has produced records and stored them into an archive. Secondly, an archive can also be the physical location where records have been collected and stored, for example, the Jyväskylä Provincial Archive. An archive can also refer to the building where an archive resides.

Therefore, when we talk about an archive, we can refer to the physical building, the organisation (e.g. the National Archive or the Jyväskylä Provincial Archive) or the records that have been collected and organised into an archive.

20.1 National Archives and Provincial Archives

The National Archives Service is composed of the National Archives as a central board and of seven provincial archives. The National Archives Service's task is to secure that documents and recordings belonging to the national heritage are preserved and to promote research based on them.

The seven provincial archives are the following:

- Provincial Archives of Hämeenlinna
- Provincial Archives of Turku
- Provincial Archives of Mikkeli
- Provincial Archives of Jyväskylä
- Provincial Archives of Vaasa
- Provincial Archives of Joensuu
- Provincial Archives of Oulu.

The provincial archives are administratively under the direction of the National Archives in Helsinki. They function as repositories of the records

of government agencies and departments in their respective areas, and are also responsible for archive administration in their respective areas. The provincial archives also store significant private collections. The records of central government are stored in the National Archives.

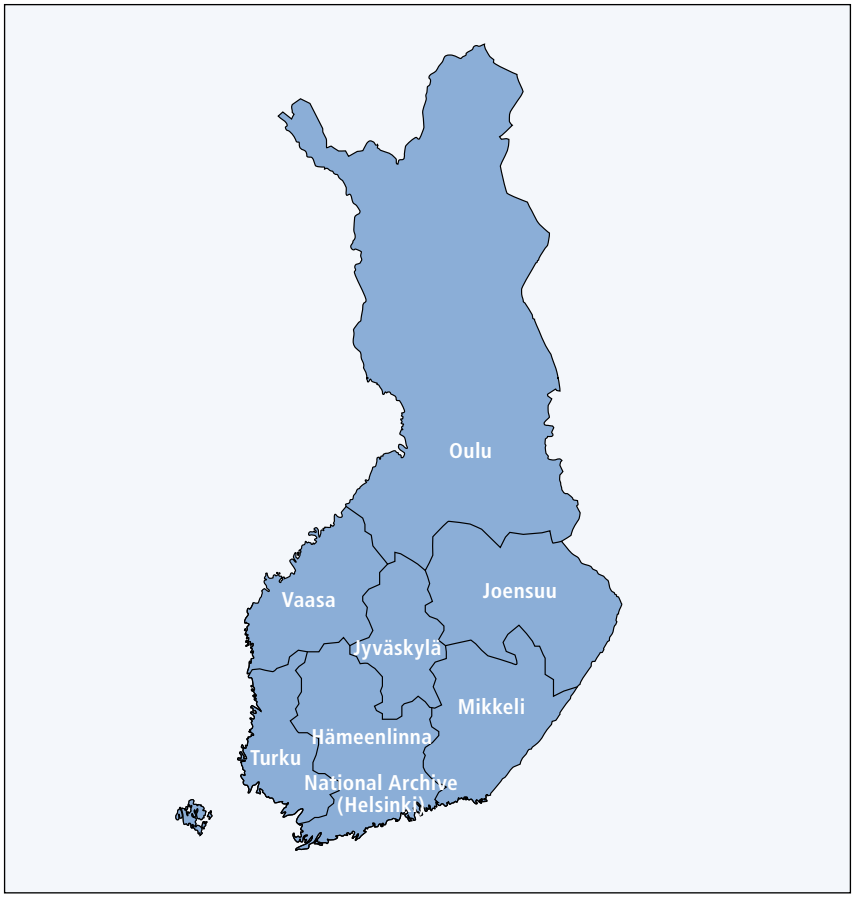

Figure 38. Finland's provincial archives by city location.

20.2 What is a document?

Marjo Rita Valtonen (1999) has defined the following tasks for a document:

- communication task
  - Documents are stored and used to communicate information especially in connection with search situations. The information does not directly relate to how documents are stored.

- processing task
  - Documents are a tool for handling and processing matters.
- publicity task
  - The receipt and sending of documents and their processing are registered in accordance with legislation governing the public availability of documents.
- evidential task
  - Documents are used as evidence in court or other public sector processes, e.g. in claims or appeals.
- symbolic task
  - Documents as such, by means of their existence, indicate rights, obligations or commitments (securities, international agreements, declarations).

According to Valtonen (1999), documents must always be accessible, usable and readable to meet the above conditions.

A document is always produced for some specific purpose. It can be a letter, agreement or appeal, for example. A document does not have to be a physical document to be considered a document. A document can also be in electronic format (e.g. an offer). Documents can be saved in many ways.

20.3 Legislation pertaining to documents and the public availability of documents

Legislation pertaining to documents covers the documents produced by companies. Safekeeping periods, for example, have been defined for different kinds of documents. Some documents can never be destroyed, while others can be destroyed after a specified period of time. A company's accounting documents, for example, must be saved.

In accordance with the principle of public availability, all documents saved in archives by the authorities are public documents, unless they have otherwise been ruled to be confidential. This also applies to personal data registers. Documents that have been defined as confidential can be used for purposes such as research with a special permit. Documents from private archives that have been handed over to the archiving authorities for safekeeping are also public documents, unless the surrendering party has set limits for the use of the private archive or some of its documents.

The public availability of documents is based on Chapter 12 of the Constitution of Finland, which states that all documents or recordings under the possession of the authorities are public, unless their publication has for compelling reasons been restricted. Everyone has the right of access to public documents and recordings. (Vuortama & Kerosuo 2004, 38.) The public availability of documents has been further specified in legislation (Section 6 and 7 of the Act on the Openness of Government Activities). Public availability depends on the purpose of the document (Vuortama & Kerosuo 2004, 46.)

The principle of public availability applies to documents produced by public authorities. The documents produced by companies are not public, unless otherwise so defined. For example, staff salaries of government-funded universities of applied sciences are public information. In contrast, a university of applied sciences that is a limited liability company does not need to disclose the salaries of its staff.

The principle of public availability has the aim of promoting equality, democracy and transparency among citizens. A further aim is to eliminate wrongdoings. When citizens are given the opportunity to monitor the activities of public authorities, they can also take action to correct any faults they observe. With regard to companies, the matter is different. A citizen has few opportunities to intervene in a company's operations, unless he or she is a shareholder, for example.

20.4 Diaries, catalogues and directories

Diaries, catalogues and directories make it easier to find documents. Directories, for example, can cover specific archives. Diaries can cover all correspondence received by a public authority, listing all the letters sent and received by the organisation. Diaries can also involve appeals, e.g. a list of all appeals received by an authority. Catalogues are typically inventories of property or similar.

20.5 Archival structure and plan

All archives are based on a predetermined structure, which makes it easier to locate the documents you are looking for. An archive's structure is based on an archiving plan, which the National Archives has defined as follows:

- guidelines for handling, registering and safekeeping of an organisation's documents and recordings
- covers all documents and recordings accrued by the organisation, as well as the systems and methods for their registration and processing
- is a part of the organisation's document management handbook.

Source: Opas arkistonmuodostussuunnitelman laatimiseksi ja ylläpitämiseksi. National Archives of Finland. 2007. URL: http://www.ams-opas.fi/ams/ams-etusivu/.

An excellent guide (in Finnish) for formulating an archival structure and plan is available on the National Archives' website at http://www.ams-opas.fi/ams/.

20.6 The company archive

Documents are also proof of action or the intention to act in a specific way. This is why they are important for companies. A company's documents can be divided into two main groups from the archiving point of view. Key historical documents (e.g. annual reports, board meeting documents etc.) that are not needed in daily use can be placed in the remote archive, while newer documents that may be needed, e.g. annual reports from recent years, are saved in the on-hand archive.

It is important for companies to have a well-organised on-hand archive. It allows matters to be handled quickly and efficiently. That is why it should be organised with care.

Documents stored in the remote archive are also important. This is not only because some of them must legally be stored for specified periods of time, but also because they are safekeepers of the company's legacy. A well-kept archive is an indispensable source of information to the writer of the company history, for example.

20.7 Towards the electronic archive

Archives have faced the challenge of digitalised content since the 1990s. Electronic documents are increasingly common and they must be saved in accordance with the same principles that apply to the safekeeping of printed documents.

A variety of document management software solutions are available on the market. They allow companies to establish, use and maintain their electronic archives in a cost-effective way.

Although documents can be conveniently stored and used in electronic format, compatibility can become an issue in the long run. It might be the case that some documents must be accessible even after tens of years. Furthermore, information security can also pose a challenge for electronic archives. Some documents contain sensitive material and therefore measures must be taken to ensure that they do not end up in the wrong hands. Most electronic archives are designed for daily use, however, and in such cases issues of compatibility and security are not such great concerns.

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