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The desktop operating system Haiku

Analysis of the operating system with focuses on ease of use, GUI, multimedia capability and an empirical research of the Haiku community

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A. Introduction

What is the most important difference between personal computers nowadays?

While there had been many different hardware platforms for personal computers in the 1980s and the first half of the 1990s, for example the famous home computers such as the Commodore 64, Commodore 128, Amiga or Atari ST, today most of the personal computers are based on the same hardware architecture: they are x86 compatible and contain in most cases a processor from Intel or AMD. Even Apple installs x86 compatible processors in most of their new computer systems.

When we take a look at the interfaces for the graphic cards and peripheral devices, so we recognize that there are also standards which dominate the market. For example, think about the PCI bus and the USB interface.

Nowadays the most important difference between the personal computers is not the hardware architecture but it is the operating system which is installed by the manufacturer or the user.

The leader in the market is Microsoft with the Windows operating systems, followed by Apple Mac OS X, Linux, FreeBSD, Unix and a large number of other not very well known operating systems.

Most of the well known operating systems are not free. Only some Linux and FreeBSD distributions are free for private purposes, but both operating systems are mostly used for server systems and are very rare on desktop clients because many Linux and FreeBSD distributions are not very easy to use and a great number of ordinary users is deterred or confused.

In opposite to Linux and FreeBSD, Haiku is meant to be a very end-user friendly operating system that specially targets personal computing.

"Haiku is a fast, efficient, easy to use and learn open source operating system inspired by the BeOS that specifically targets personal computing. It is also the name of the project that develops and promotes Haiku the operating system."¹

Perhaps you already heard the term Haiku in literature. Haiku is a classical Japanese poetry form and belongs to the most important poetry forms from Japan. It is a simple and very short poetry form. Nowadays a Haiku poem has three lines of five, seven and five syllables. The form of five-

1 *Quotation: Haiku, Inc.: What is Haiku?, in the internet: <http://www.haiku-os.org/about/faq>, Date: 19th June 2010*

seven-five syllables is a must in Japanese², but in the English language, which is not based on syllables, it is not always easy to fulfil this requirement.

*An old pond!
A frog jumps in-
The sound of water.*

(A Haiku written by Matsuo Basho, 1644-1694)³

A Haiku shall paint a clear picture that contains only the most important elements and aspects of something. The topic of a Haiku is often from the daily life, about feelings, nature, work or daily experiences.

The operating system Haiku was named after this Japanese form of poetry to express the simplicity and user-friendliness of the operating system from the point of view of the users:

“Haiku is named after the classical three-line Japanese poetry form. Haiku poetry is known for its quiet power, elegance and simplicity - among the core qualities of BeOS which we aim to recreate in Haiku. BeOS included some haiku in its user interface, in the form of network error messages displayed by its web browser. An example:

*Sites you are seeking
From your path they are fleeing
Their winter has come.*

While there are no current plans to include poetic messages in Haiku, we consider this another subtle way of proudly cherishing our BeOS roots.”⁴

From the point of view of the end-users the graphic user interface (GUI) plays a major role regarding software ergonomics.

For users that are not very versed in technology the GUI seems to be the most important component

2 *Japanese words consist of syllables and vowels. Therefore Japanese sounds very harmonic and melodic.*

3 *Toyomasu, K. G.: HAIKU for PEOPLE, in the internet: <http://www.toyomasu.com/haiku>, last updated: 10th January 2001, Date: 14th August 2010*

4 *Quotation: Haiku, Inc.: General FAQ: Where does the name Haiku come from?, in the Internet: <http://www.haiku-os.org/about/faq>, Date: 24th July 2010*

of the operating system, perhaps they even identify the operating systems only by looking at the graphic user interface.

Haiku is inspired by BeOS, which is often also called the Multimedia OS because it was very advanced and powerful in fields of multimedia, audio and video editing in the past when competitors such as Windows 95 were very unstable when trying to simultaneously play several video clips (see chapter 1).

Just like BeOS, Haiku also sets a focus on multimedia capabilities because most ordinary end-users need their personal computers not only for classic purposes such as writing letters and working, but they also need them for listening to music, watching video clips, editing photographs and private video recordings. Therefore the multimedia capabilities are a very important feature of a desktop operating system which targets personal computing.

Because of the above mentioned aspects, among other things the graphic user interface and the multimedia capabilities of Haiku will be analysed and discussed in this master thesis. In so doing, the focuses will be set on both: the psychological aspects of software ergonomics and the technological aspects (see chapter 5). These questionings will be set in the foreground:

- Which aspects of design are important for the usability of a graphic user interface?
Which of these aspects are implemented in the graphic user interface of Haiku?
- What is the performance of the graphic user interface, especially the response time regarding the interactivity with the user?
- Is the graphic system powerful regarding multimedia applications and games?
- How does the technical implementation regarding music and sound look like?
- What are the advantages and disadvantages of the Haiku graphic user interface and the graphic system?
- Are the structure and the documentations of those components, that are relevant for the multimedia capabilities and the development of the graphic user interface, attractive from the point of view of software developers?

The chapters 5 and 6 are the most important parts of this master thesis.

In the chapter 6 the results of an empirical research are presented. The data source of this empirical study is my online survey which is designed to research the Haiku community. The main goals of this empirical study are:

- The analysis and clustering of the members of the Haiku community regarding their sociodemographic characteristics and their information technology background.
- To find out why the members of the Haiku community are interested in Haiku.
- It is interesting to find out how people use Haiku and what are the most important purposes.
- The identification of the expectations of the users regarding Haiku.

For many readers of this thesis Haiku is an unknown operating system. Therefore it will be introduced in the first three chapters. These chapters do not belong to the most important parts of this thesis, but they are important to give the reader an opportunity to holistically understand the Haiku operating system.

My thesis is that Haiku could become a popular, user-friendly and fast desktop operating system that has only low hardware requirements and can be used in cheap PCs, notebooks and netbooks.

I will explain my thesis by giving further information in the chapter 4 and test it by analysing the user-friendliness and the multimedia capabilities of Haiku in the chapter 5 and researching the Haiku community in the chapter 6.

From my point of view, Haiku is already now a very user-friendly and fast operating system, although it is only an Alpha version and there are still many problems that will be hopefully solved in the next few years. Furthermore, I will explain why I think that Haiku is not a powerful multimedia operating system at the moment, but it could perhaps become very powerful in fields of multimedia and games in the future.