

České vysoké učení technické v Praze  
Fakulta jaderná a fyzikálně inženýrská

Katedra matematiky  
Obor: Aplikovaná informatika



Návrh informačního systému pro  
podporu forenzního auditu  
Design of an Information System for  
Support of Forensic Audit

BAKALÁŘSKÁ PRÁCE

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Vedoucí práce: Mgr. Karel Macek, Ph.D.  
Rok: 2015

Před svázáním místo téhle stránky 

vložíte zadání práce
----------------------

 s podpisem děkana (bude to jediný oboustranný list ve Vaší práci) !!!!

## **Prohlášení**

Prohlašuji, že jsem svou bakalářskou práci vypracovala samostatně a použila jsem pouze podklady (literaturu, projekty, SW atd.) uvedené v příloženém seznamu.

V Praze dne .....

.....  
Edita Pešková

## **Acknowledgement**

I wish to thank to my supervisor for his inspiring feedback, my family for their patience and support in my studies and anyone who encouraged me in this project.

Edita Pešková

*Název práce:*

**Návrh informačního systému pro podporu forenzního auditu**

*Autor:* Edita Pešková

*Obor:* Aplikovaná informatika

*Druh práce:* Bakalářská práce

*Vedoucí práce:* Mgr. Karel Macek, Ph.D.

Oddělení ekonometrie, Ústav teorie informace a automatizace

*Konzultant:* —

*Abstrakt:* Tato bakalářská práce předkládá návrh systému a naznačuje požadavky, které jsou potřebné aby byl popsán smysl a cíle technik digitálního forenzního vyšetřování, vykonávaných forenzními auditory, účetními a inpektory firem. Pomocí různých postupů, nástrojů a technik rozpoznáváme v jakých případech mohou nástroje forenzního auditu poskytnout auditorům potřebné informace k provedení forenzního auditu. Bakalářská práce představuje požadavky, které musí splňovat vlastní informační systém použitelný pro podporu vyšetřování a také poskytuje detailní návrh tohoto systému.

*Klíčová slova:* Forenzní audit, Vyšetřování, Návrh systému, Databáze, Sběr dat

*Title:*

**Design of an Information System for Support of Forensic Audit**

*Author:* Edita Pešková

*Abstract:* This bachelor project proposes a system design and suggests requirements that are needed in order to describe the purpose and goals of the digital forensic investigation techniques carried out by the forensic auditors, accountants and examiners of companies. Using various procedures, tools and techniques we identify where the forensic audit tools and the system can provide the auditors necessary information to carry out forensic audit. This bachelor thesis provides requirements that our own information system usable to support forensic audit must follow and also provides a detailed design of this system.

*Key words:* Forensic audit, Investigation, System design, Database, Data collection

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# Introduction

There are two main areas in this project. At first the field of forensic audit and its frequently recurring processes are introduced. Secondly an information system for support of forensic audit is discussed and designed. The result of this project is a guide for a programmer to help easily implement a system usable in the field of forensic audit.

In the first part of this bachelor project we get to know the whole branch of forensic audit together with some of the issues that are commonly appearing while conducting the job of a forensic auditor. Next we propose several methods of forensic audit and we try to analyze whether a computer support is appropriate to be considered. Examples of available software solutions for selected cases are also offered. With regard to introduced methodology, we describe the requirements on our own system that could be helpful in the execution of forensic audit. In the following section a design of the new application is systematically described. UML diagrams are used to clarify the system design. A discussion about technologies to be used for implementation is provided in the end of this project. Final chapter is dedicated to a conclusion.

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

# Chapter 1

## Forensic audit and its computer support

na zacatek shrnout co vsechno obsahuje tato kapitola

### 1.1 Forensic audit

#### Definition

- zde v hrubych rysech jak to probiha (to co uz mam sem patri), na zaklade toho, co jsem zjistila FA funguje takto:...

#### use case diagram

Velky obrazek vseh zainteresovanych stran



## Chapter 2

# Navrzena (uvazovana) metodika

Jsem si vedoma, ze jsem clovek, který to nikdy nedelal (= omezena znalost). Toto je jak to chapu. Toto neni jak by to nekdo mel delat. Toto je seriozni pokus popsát proces forenzniho auditu. PROCESNI DIAGRAMY!!!

vystupem = okomentovany obrazek, který dava hlavu a patu

a Use case diagrammem pak kontaktovat praxi

# Chapter 3

## Discussion

### 3.1 Further improvements

- pokryt dalsi administrativni casti (zacatek, konec)
- detailnejsi navrh a implementace
- detailnejsi osetreni rizik
- zamysleni nad sdilenim zkusenosti (duvernost vs. rust expertyzy auditorske spolecnosti)
- vyuziti mimo FA - jina administrativa + moduly pro vyuziti policii / soudy

# Attachment A

## Contents of the CD

### The text of this bachelor project in pdf

The text of this bachelor project is saved as `BP_Peskova.pdf` in root folder.