# 15. SUMMARY

## Concept and nature of fingerprinting

The purpose of my thesis is to completely examine the issue of dactyloscopy and introduce this forensic method, both the theoretical and practical parts. It deals with the historical development of dactyloscopy, the legislation in the Czech Republic, fingerprint impression, capture, constancy, detection and comparison. For greater clarity and orientation, the thesis is composed of several parts - each dealing with different aspects. It is also supplemented with pictures that help to imagine a particular thing.

Chapter One contains an introduction which gives a general view of dactyloscopy as a forensic method.

Chapter Two deals with the historical development and important personalities of dactyloscopy. It explores the origins of knowledge of fingerprint patterns in ancient times and also focuses on the pioneers of dactyloscopy. The chapter is subdivided into three parts. Part One deals with Jan Evangelista Purkyně who first described and classified the basic patterns of friction ridges on distal phalanges. Part Two mentions the world personalities of dactyloscopy (for example Francis Galton, Juan Vucetich, Henry Faulds). The development of dactyloscopy in the Czech Republic is included in Part Three.

Chapter Three discusses the concept, the object, the nature and importance of dactyloscopy.

Chapter Four examines relevant Czech legislation. The important parts are particularly regulations that specify how to overcome resistance of those people who refuse to undergo fingerprinting.

Chapter Five addresses the issue of physiological principles of dactyloscopy. It consists of three parts. Part One covers the first principle – the distinctiveness of fingerprint patterns. Part Two deals with the second principle – the relative constancy of fingerprint patterns. The third principle – the relative irremovability of friction ridges – is contained in Part Three.

Chapter Six discusses the characteristics of skin, its importance and function in terms of dactyloscopy. The method is based on biological knowledge of human skin.

Chapter Seven is the most extensive. It deals with fingerprint traces. The chapter is divided into five subchapters. Part One puts focus on the origin and classification of fingerprints, Part Two deals with the temporal constancy of fingerprints and is supplemented with my own experiment. Part Three describes various laboratory techniques of fingerprint capturing. Part Four investigates fingerprint detection on the skin of corpses. The last part of this chapter is concerned with fingerprint detection.

Chapter Eight is subdivided into three parts and deals with fingerprint detection and identification. Part One deals with fingerprint detection of living people, Part Two with fingerprint detection of corpses. Part Three describes the process of fingerprint identification.

Chapter Nine explores the systems of fingerprint classification. Special attention is paid to the automated fingerprint system AFIS 2000.

Chapter Ten is concerned with the application of dactyloscopy outside criminal practice, especially in fields such as security systems and medicine.

Conclusions are drawn in Chapter Eleven. In my opinion, dactyloscopy still has some potential, thanks to the great progress in science and technology, and it will continue to be one of the most widely used method for identifying people.

**Key words:** dactyloscopy, fingerprints, friction ridges.