**ABSTRACT**

The spread of navigation devices has increased significantly over the last 10 years. With the help of the current development of even smaller navigation receiver units it is to navigate with almost any current smart phone. Modern navigation systems are no longer limited to satellite navigation, but use current techniques, e.g. WLAN localization. Due to the increased use of navigation devices their relevance to forensic investigations has risen rapidly. Because navigation, for example with navigation equipment and smartphones, have become common place these days, also the amount of saved navigation data has risen rapidly. All of these developments lead to a necessary forensic analysis of these devices. However, there are very few current procedures for investigating of navigation devices. Navigation data is forensically interesting because by the position of the devices in most cases the location and the traveled path of the owner can be reconstructed. In this work practices for forensic analysis of navigation devices are developed. Different devices will be analyzed and it is attempted, by means of forensic procedures to restore the traveled path of the mobile device. For analysis of the various devices different software and hardware is used. There will be presented common procedures for securing and testing of mobile devices. Further there will be represented the specials in the investigation of each device. The different classes considered are GPS handhelds, mobile navigation devices and smartphones. It will be attempted, wherever possible, to read all data of the device.