Chapter 10

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ABSTRACT
Standards and specifications for public security are missing in many technical aspects as well as the areas of communication protocols and security management. Several technology management research gaps related to this field exist, particularly regarding R&D stage standardisation. This chapter gives insight into the development of a specification (DIN SPEC) for the protection of transportation infrastructure based on civil security research results. Besides providing practical examples for activities related to the popular standardization strategy framework of Sherif, Jakobs, and Egyedi (2007), the chapter suggests its extension. Standardisation challenges and solutions are also unveiled. The chapter finishes by outlining key aspects that may influence the adoption of the specification. Fields of application of the findings include, in particular, fast track standardisation procedures with voluntary implementation of the results, the standardisation of R&D results, and standardisation projects among small groups.

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1. INTRODUCTION

1.1 Public Security, Standards, and Standardisation Needs

The global intensity and frequency of terrorist attacks since the turn of the century show the vulnerability of modern societies and the need for protecting so-called critical infrastructures (see European Commission, 2004). Several recent studies highlight the need for security-related standards, e.g. ECORYS (2009), ESRIF (2009), the European Commission (2008, 2011a) and the European Council (2010). Standards and specifications for public security are missing in many technical aspects, as well as the areas of communication protocols and security management.

Sinay (2011) defines security as ‘a system of measures, including their embodiments and their interactions, designed to ward off intentionally destructive activity resulting in injury or material damage’. The current global market size for security technologies and services is estimated at 100 billion Euros (approximately 143 billion US dollars), and the annual growth rate is predicted at a minimum of approximately 5% for the next few years (see ECORYS, 2009).

Standardisation is ‘the activity of establishing and recording a limited set of solutions to actual or potential matching problems directed at benefits for the party or parties involved balancing their needs and intending and expecting that these solutions will be repeatedly or continuously used during a certain period by a substantial number of the parties for whom they are meant’ (de Vries, 1999, p. 13). Blind (2004), as well as Swann (2000, 2010), offer an extended overview of the many advantages standardisation provides for the parties involved. To stimulate lead markets for security-related technologies and services, standards and specifications may provide a knowledge and technology transfer, connect relevant stakeholders, foster innovative demand, provide innovation-enhancing regulatory frameworks, intensify competition and increase exportability (see Blind, 2008a). Although some scientists are closely involved in standardisation processes, many researchers not only in the security field do not use the special opportunities that standardisation can offer to them (see Blind & Gauch, 2007).

The present study was part of the German project InfraNorm (2010-2013). Its goal was to initiate the development of standards and specifications for the protection of transportation infrastructure based on R&D stage standardisation and to provide a standardisation manual for the participants of the German Framework Program ‘Research for Civil Security’.

1.2 Standardisation Instruments for Researchers

Standardisation is an important catalyst for innovation and modern societies need to include new knowledge from the research field in standards to promote innovation and competitiveness (see Blind, 2009; EXPRESS, 2010; CEN-CENELEC STAIR, 2011). But there are obstacles. The project INTEREST examined the barriers that prevent researchers from getting involved in standardisation. Three categories of barriers were identified: a lack of resources, the standardisation process itself and the lack of awareness and visibility of standards and standardisation processes. The third category illustrates in particular that researchers are not aware of the potential benefits of active participation in standard-setting (Blind & Gauch, 2007; INTEREST, 2006). Emphasising these issues, the report on the future of European (EU) standardisation stresses the need to improve mutual awareness and cooperation between standardizers, innovators, and the research communities (see EXPRESS, 2010). As a solution, the CEN-CENELEC Working Group STAIR (STAndardisation Innovation and Research) published the Integrated Approach for Standardization.