

## TRAVEL DOCUMENTS (PASSPORTS AND THE LIKE): WHAT ARE THEY; FORMALLY AND TECHNICALLY



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**VENERDÌ 27 LUGLIO**  
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**SALA RIUNIONI DII,**  
**VIA CARUSO 16**

### Abstract

In this era migration, the value of a (valid) document can not be underestimated. Travel documents are tied to identity. Also identity documents (ID-cards) can in many settings be used to facilitate travel. Thus identity, nationality, travel, identity theft, human trafficking and smuggling all are tied together. The crux of the matter: A travel document makes authentication possible. Without authentication, authorization is impossible (or carry no value).

The lecture consists of three parts.

First we present the concept of a travel document. In essence we answer the question: "Why does a passport enable you to travel?"

Second we give an introduction to ICAO, and ICAO 9303. This answers the question: "Why does page 2 on all passports look more or less the same, while ID-cards are wildly different?" We will also cover some EU regulations.

Finally we shed light on the technical framework for communicating with the NFC-powered chip inside, including the global PKI put in place to facilitate it's applicability. We will, among other things, demonstrate how to communicate with the chip and extract information. The necessary cryptography will be explained.

### Bio

Dr. Tage Stabell-Kulø is currently Senior Manager at KPMG Norway, and lives in Oslo, Norway. He has been technical lead on the layout of the new Norwegian passport and ID-card, due in 2020, including chip layout. He is currently technical lead in design and implementation of the capture of biometry for use in Norwegian passports and ID-card. He has worked on security-related issues since 1992 and his 1024-bit PGP-key is dated 1994-06-16. He holds Cand. Scient. ("Dottore") from University of Tromsø, Norway, and Doktor (PhD) from University of Twente, The Netherlands, and was associate professor at the University of Tromsø, Norway, where he established security as a separate track. He has since lived 15 years in Montemagno, Calci, travelled 200.000 km all over Toscana on his BWW motorcycle, is certified according to HACCP, and holds a *Licenza somministrazione al pubblico di alimenti e bevande*

Per esigenze logistiche occorre registrarsi inviando una mail a [master-security@iet.unipi.it](mailto:master-security@iet.unipi.it)