



Federal Office
for Information Security

ePassport Based Identity Check



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BSI – activities regarding eMRTDs



- IT security
 - Specification and standardization of security mechanisms (ICAO, ISO, EU, national level)
 - National root CAs (CSCA, CVCA, N-PKD)
- Biometrics
 - Evaluation of biometric technologies
 - Biometric framework BioMiddle
- Certification and approval
- Pilot projects
 - ePassports at the German border (e.g. EasyPASS)





Main steps ePassport & EasyPASS

- Nov. 2005: Issuance of the 1st generation ePassport (face)
- Nov. 2007: Issuance of the 2nd generation ePassport (face and finger)
- Nov. 2007 – June 2009: Pilot project “Reading and Checking ePassports”
 - Read and checked ePassports from 62 countries
 - Setup of the background infrastructure to provide trusted CSCA certificates
 - Able to check the complete chain of trust from 40 countries
- Aug. 2009: Start of the pilot project **EasyPASS**



Main steps

New German ID Card & EAC IS

- Nov. 2010: Issuance of the new German ID card (face and optional finger)
- Since May 2011: Pilot Extended Access Control Inspection System (EAC IS) for
 - Read access to Extended Access Control (EAC) protected data in ePassports
 - Support for the new German ID Card in EasyPASS and during regular border control
 - Complete support of Masterlists and Defectlists
- Approx. Q2/2012: Regular operation including exchange of DV-certificates within EU



EasyPASS – project overview

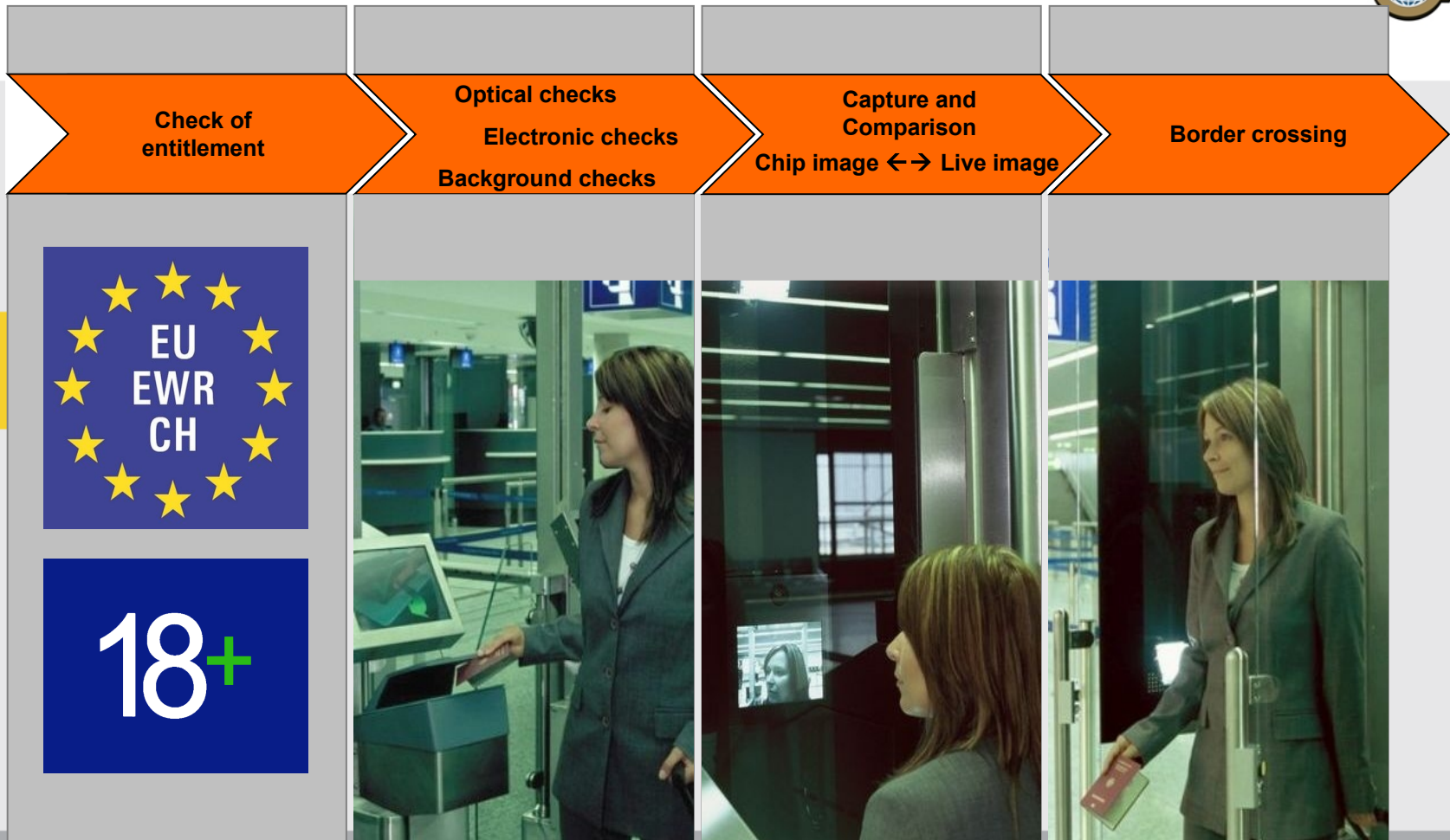


- Pilot project of BSI and the German Federal Police
- Semi-automated eGate scenario
 - Monitoring (and if necessary interaction) by border police officer
- 4 Self-service eGates, 1 monitoring station
- Open for citizens of EU/EEA/CH (18+ years old)
- Located at Frankfurt Airport
- Timetable
 - Start of operation was in August 2009
 - Pilot phase until March 2010
 - Since April 2010 regular operation



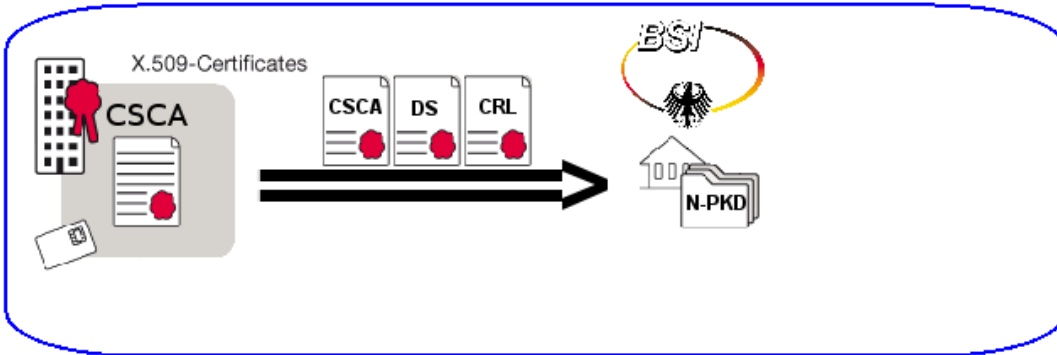


EasyPASS border control process using facial recognition





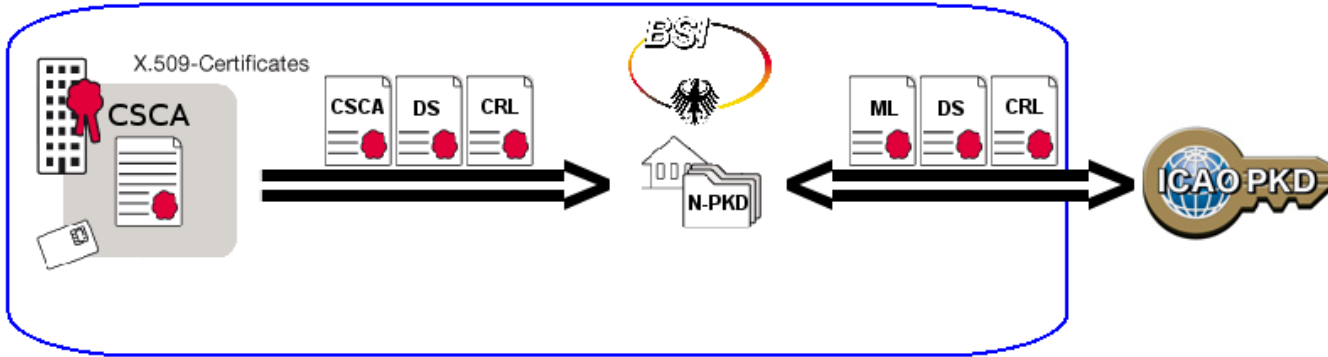
eMRTD PKI landscape



- CSCA generate
 - CSCA certificates
 - Document Signer certificates (DS)
 - Cert. Revocation List (CRL)
- N-PKD
 - Central storage of trusted CSCA certificates
 - Generate Masterlists (ML) & Defectlists (DFL)



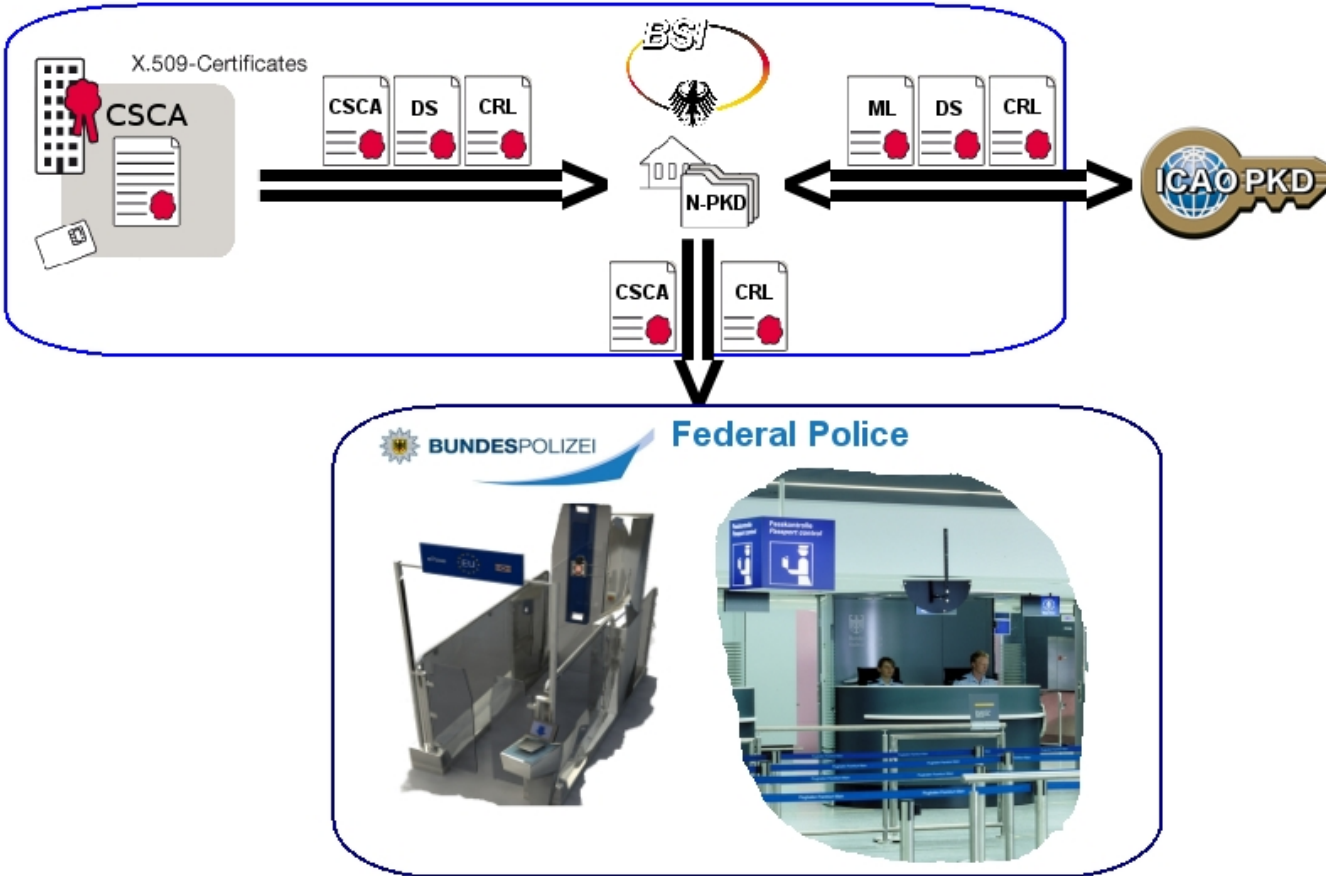
eMRTD PKI landscape



- ICAO-PKD international exchange of
 - CSCA certificates via Masterlist (ML)
 - Document Signer certificates (DS)
 - Cert. Revocation List (CRL)



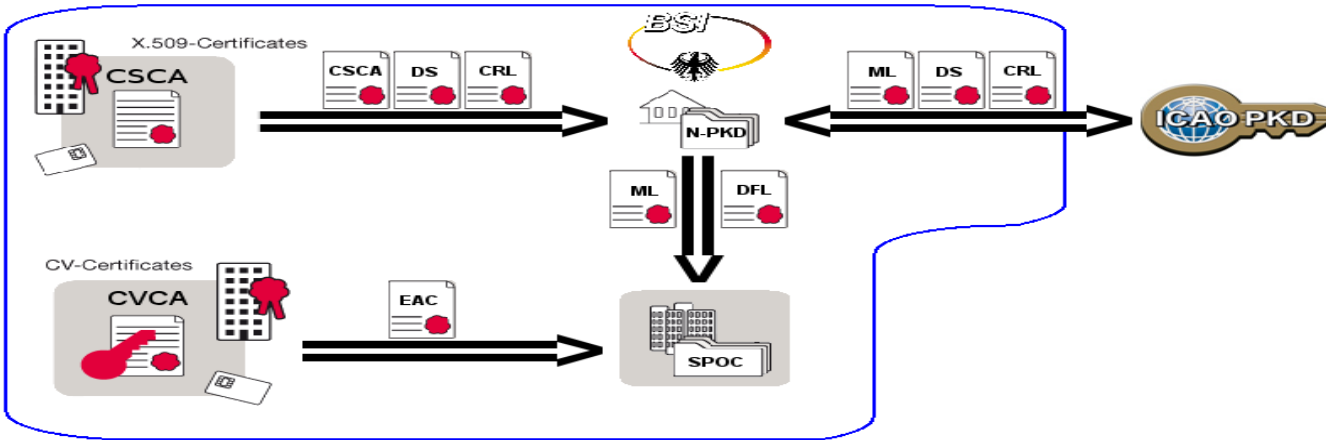
eMRTD PKI landscape



- Federal Police receives from N-PKD for automated and manual border control
 - CSCA certificates
 - Cert. Revocation List (CRL)



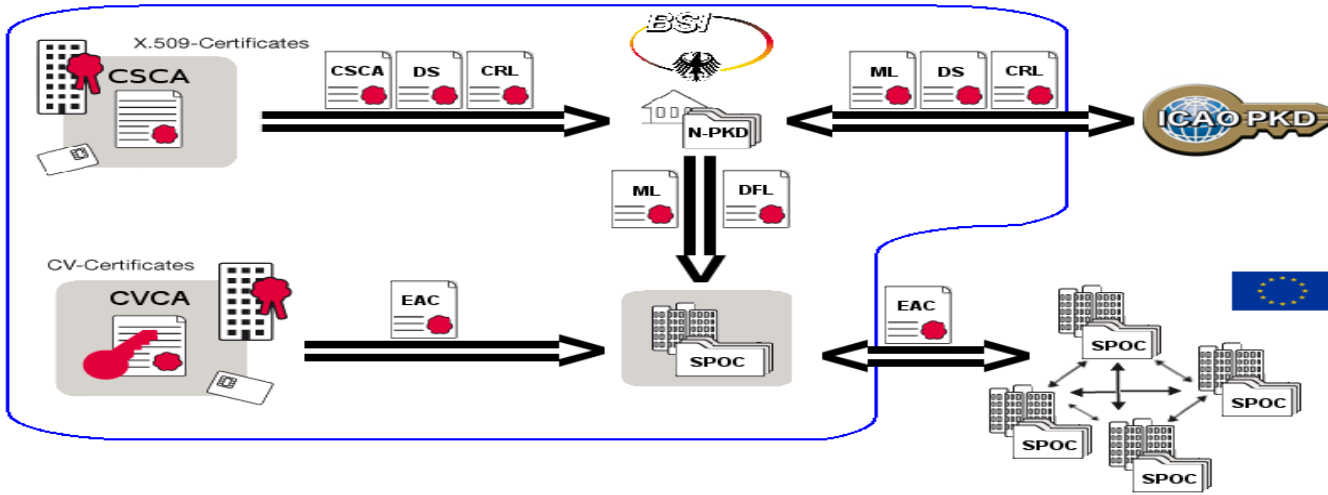
eMRTD PKI landscape Additional EAC-PKI



- CVCA generates
 - Certificates for Extended Access Control (EAC)
- N-PKD provide to Single Point of Contact (SPOC)
 - Masterlists with all trusted CSCA certificates
 - Defectlists with all collected defect information and CRL



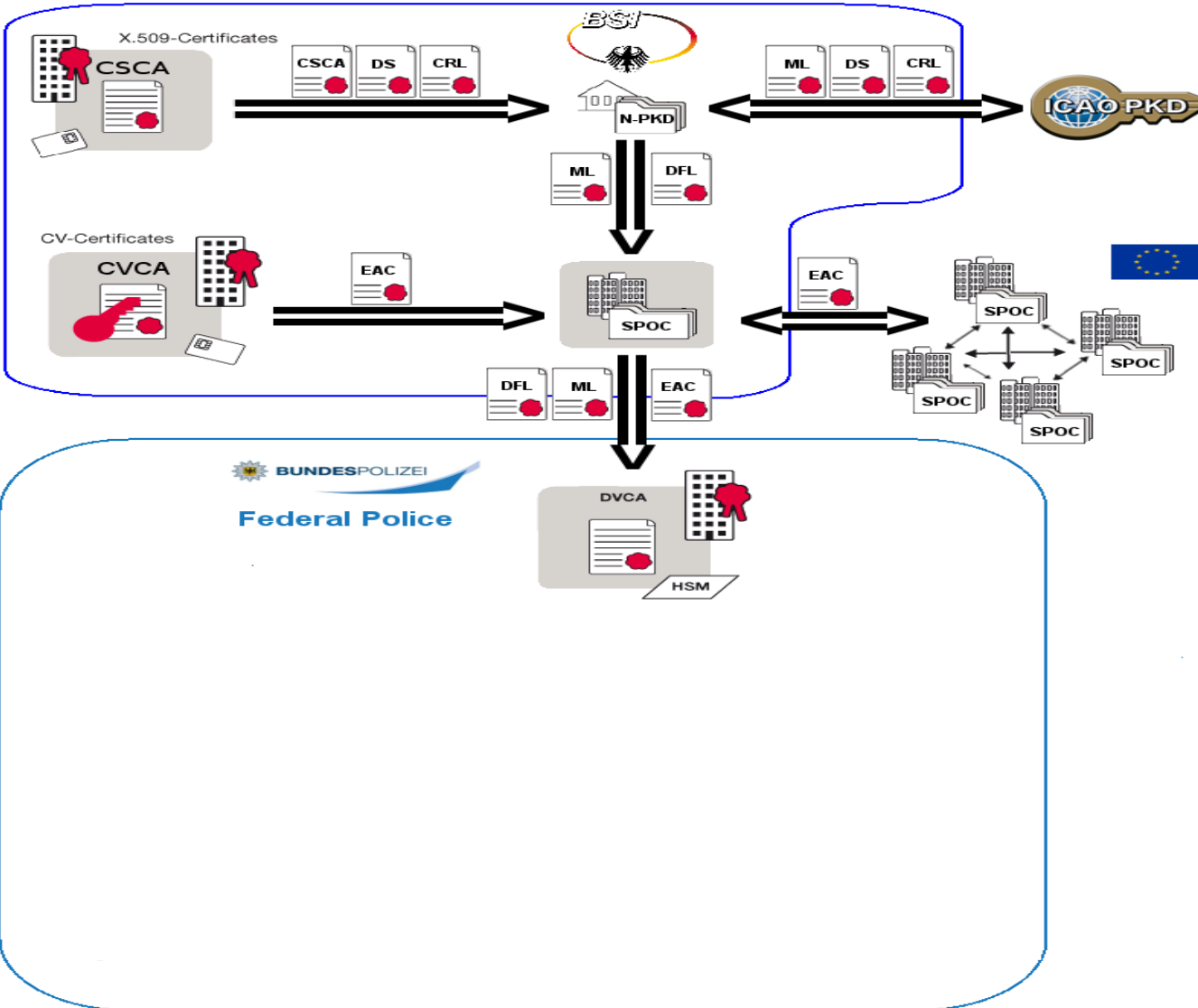
eMRTD PKI landscape Additional EAC-PKI



- Single Point of Contact (SPOC)
 - Provide and receive EAC certificates from other registered SPOCs within EU
 - Manage Registrations
 - Store and provide ML & DFL



eMRTD PKI landscape Additional EAC-PKI

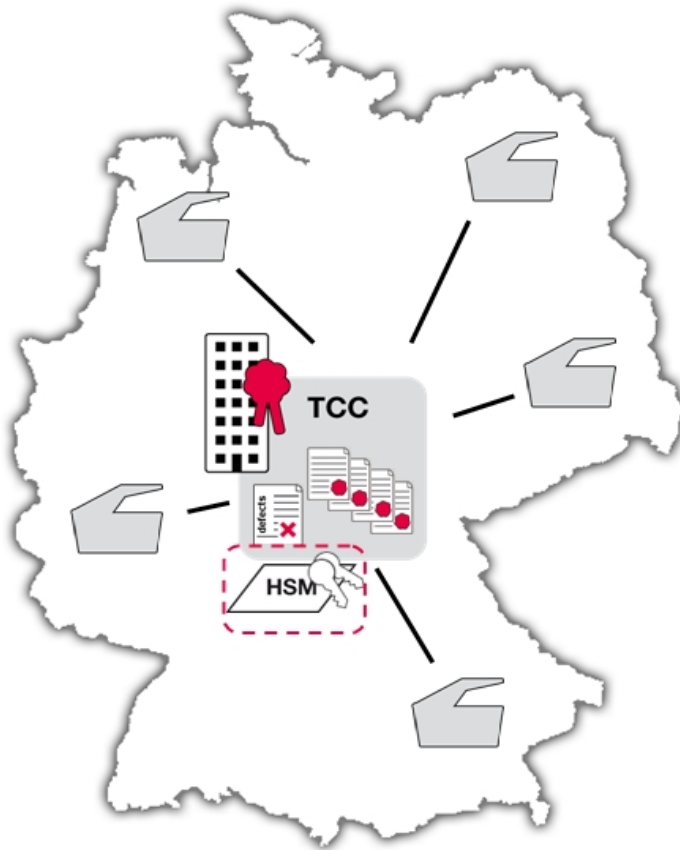


• DVCA of Federal Police

- Receives EAC certificates, Masterlists (ML) and Defectlists (DFL) from national SPOC



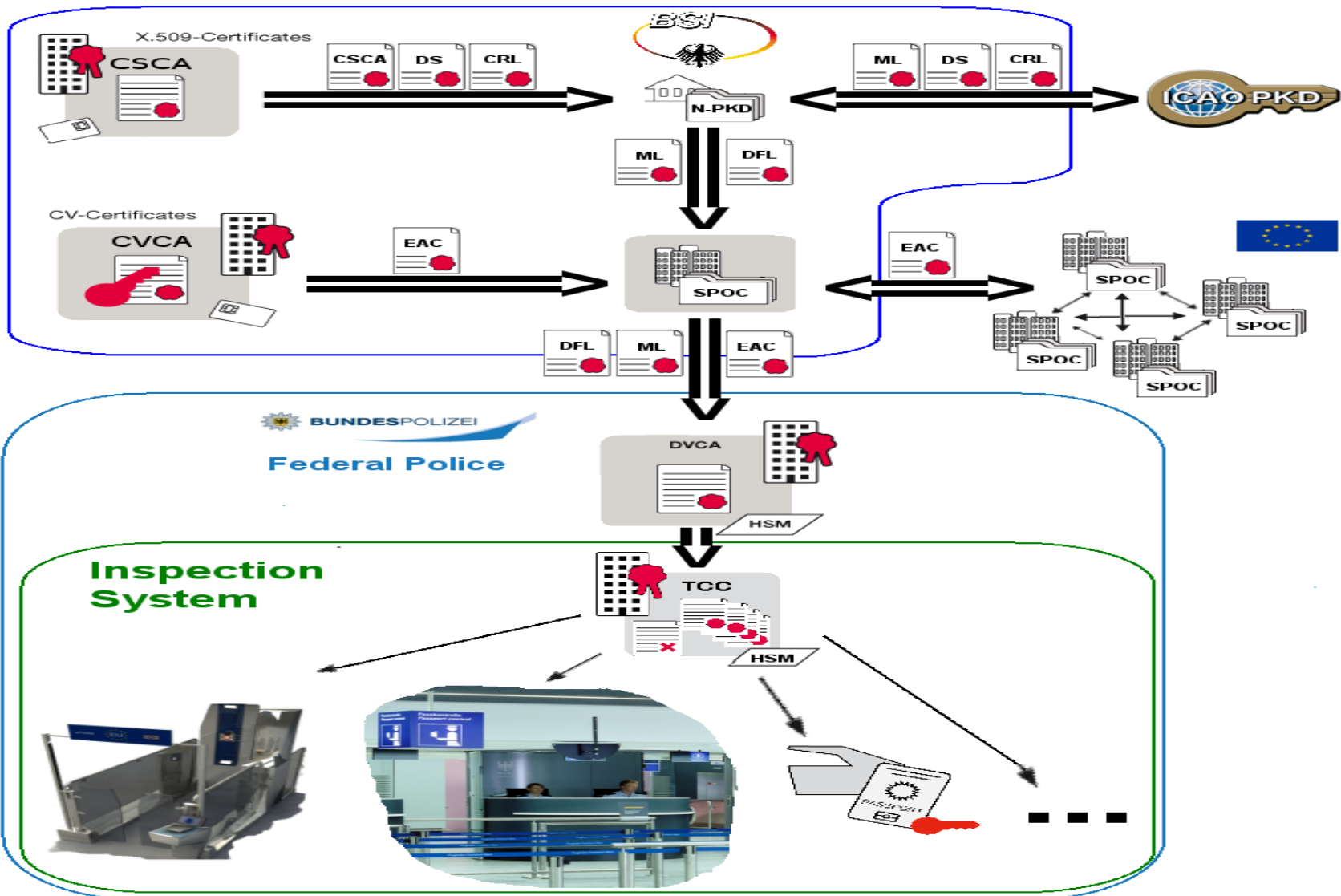
TCC – Terminal Control Center



- TCC as central PKI component
 - Centralized checking of DS certificates
 - Management of certificates and cryptographic keys
 - Authentication of connected terminals
 - Communication to DVCA and terminals via standardized interfaces



eMRTD PKI landscape in Q4/2011





ePassport Based Identity Check with PKD, SPOC & TCC

- Exchange of CRL, DS and ML via ICAO PKD with 13 active PKD Participants (June 2011)
- Exchange of EAC certificates via SPOCs within EU (regular operation estimated Q2/2012)
- TCC to serve Federal Police with all needed certificates for manual and automated border control
- In Aug. 2011 this include
 - Read and check ePassports from over 80 countries
 - Check complete chain of trust from 46 countries
 - Support for the new German ID Card



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Thank you!



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