Internet Voting in Estonia: 2011-2013

Arne Koitmäe
arne.koitmae@vvk.ee

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Municipal Elections 2013

I-voters:

2013 municipal elections:
133 808 (24,3% of participating voters)

2011 parliamentary elections:
140 846 (21,2% of participating voters)

Amendments to Election Laws (2011)

- Rules for not starting, suspension and termination of I-voting

- Testing, auditing and observation rules to be laid out by NEC

- Electronic Voting Committee (EVC) established

- Invalid I-votes defined (1 invalid vote in 2013)
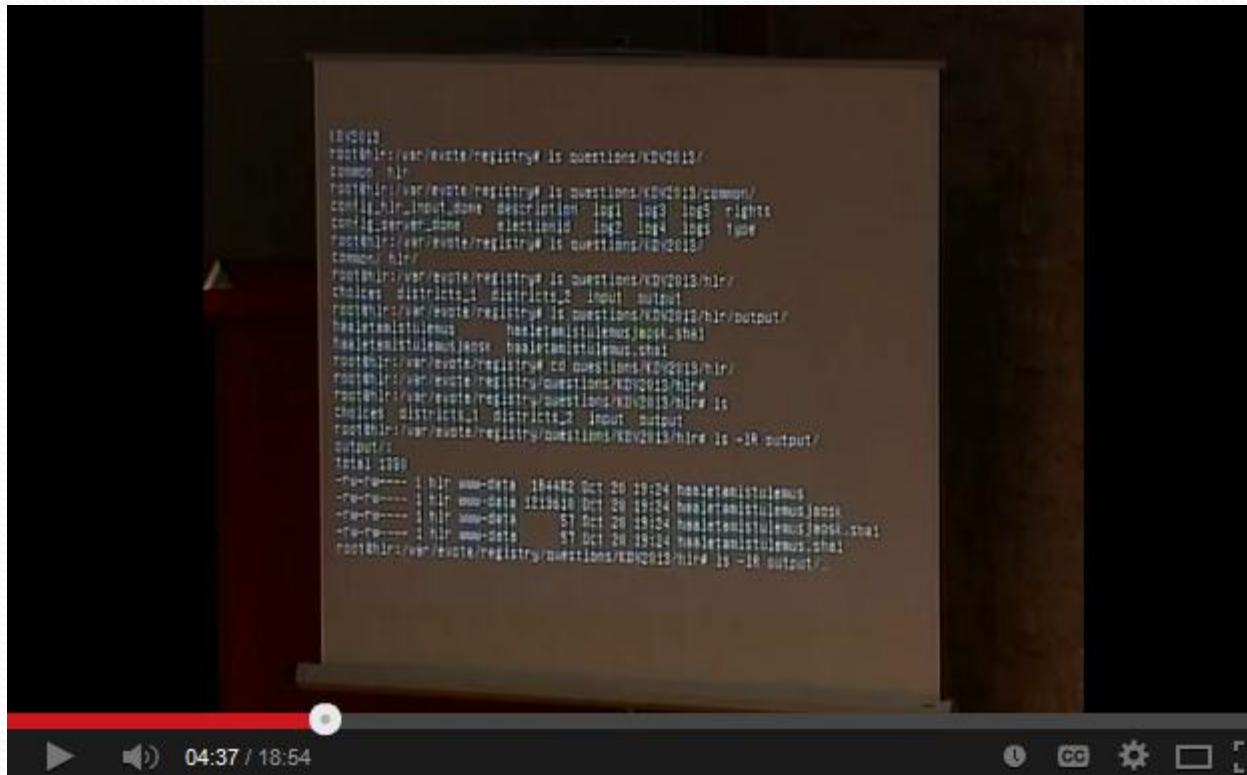
- Vote verification

Electronic Voting Committee

- Established in 2012

- Members are IT professionals

- Responsible for conducting I-voting

  http://www.valimised.ee/eng/

More transparency

Videos of all EVC procedures published at Youtube, channel"**EHK Videod"**
 https://www.youtube.com/channel/UCTv2y5BPOo-ZSVdTg0CDIbQ

Source Code Published
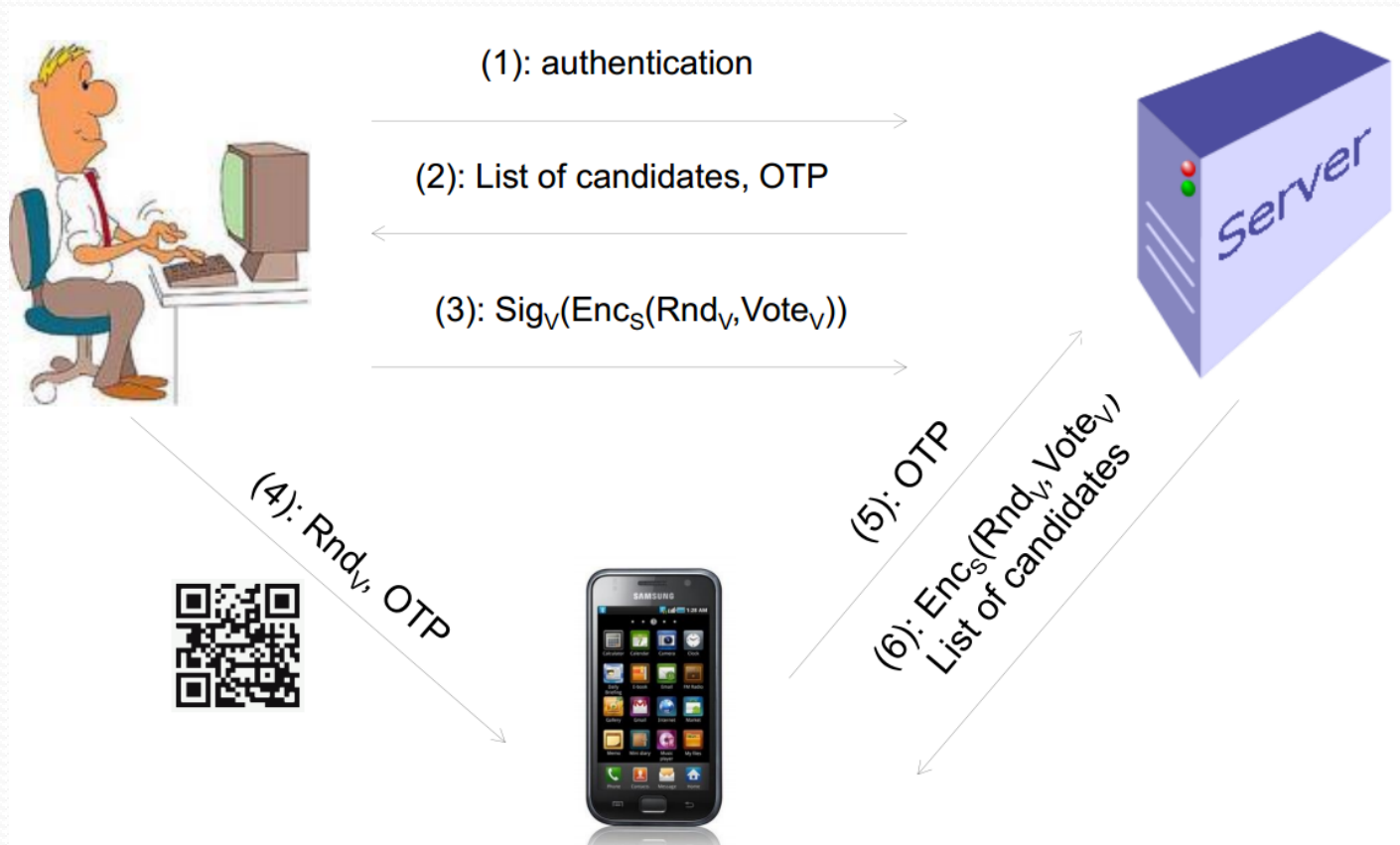
https://github.com/vvk-ehk/evalimine

- Server-side components of the I-voting system

- The vote verification application

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Verification of I-votes

- Confirms that the vote was received as intended

- Enables to check the voter's computer against malware infections

- Smart device as an independent verification channel

- Requirements for the device: camera, Internet connection, downloaded verification app

Verification of I-votes (cont.)

(1): authentication

(2): List of candidates, OTP

(3): $Sig_V(Enc_S(Rnd_V, Vote_V))$

(4): Rnd_V, OTP

(5): OTP

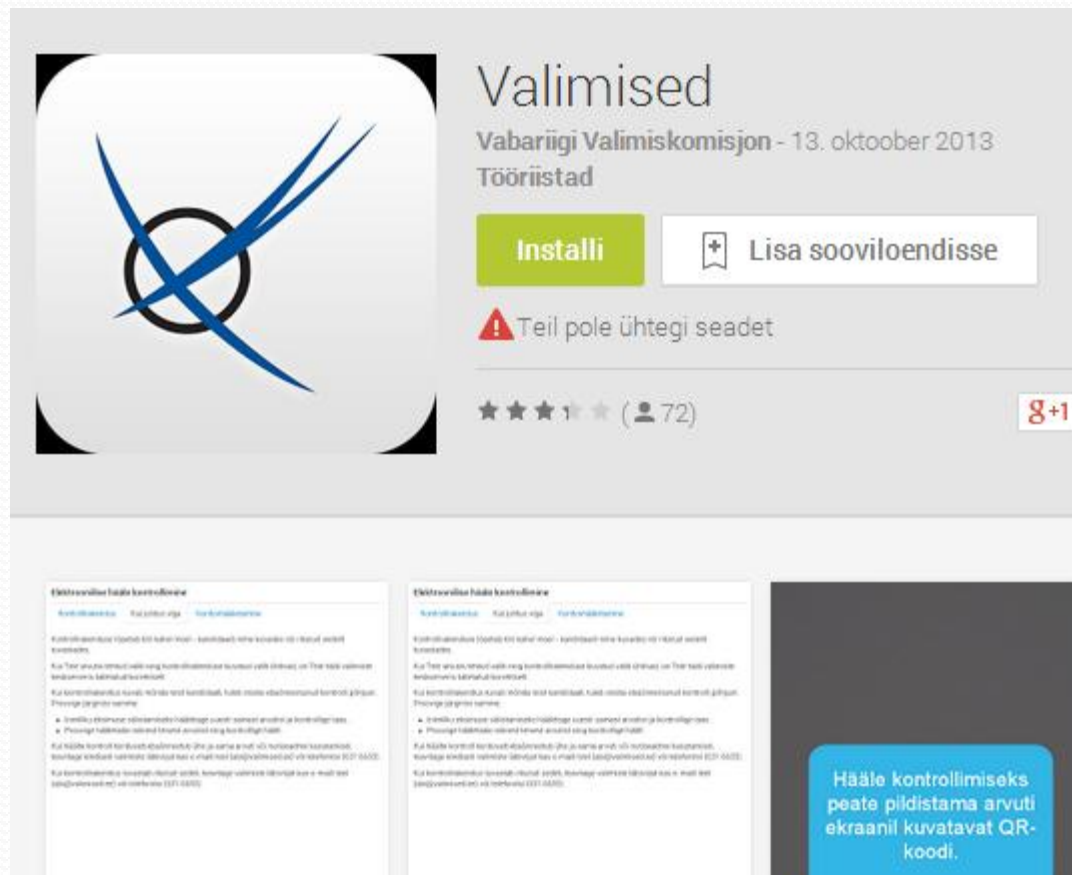(6): $Enc_S(Rnd_V, Vote_V)$, List of candidates

Internet voting application

Vote verification app (Google play)

Verification of I-votes: Results

- First test run during 2013 municipal elections

- Android devices, support for iOS and WP to be added

- 4696 (3,43%) I-votes verified (expected goal 2%)

- Currently results are legally non-binding

- Required by law from 2015

Research on the impact of I-voting

- Data and research on voter behaviour available from 2005-2013

- *„Internet Voting and Politics: how e-voting influences turnout, political neutrality and trust".* 2013 study by Kristjan Vassil, University of Tartu (to be published).

Further reading

- Estonian Internet Voting
https://www.valimised.ee/eng/

- Verification of Internet votes:
https://www.valimised.ee/eng/nutitelefon

Thank you!