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Pakistan’s Internet Voting Experiment
Pakistan and Internet Voting

1. Size/Scale/Scope
2. Time
3. Opacity/Transparency
4. Secrecy/Coercion
5. Going forward
1. Size/Scale/Scope

- 2018 By-elections
- 32 Constituencies
- Total Electorate (9.2m), similar to that of: Romania, Chile, Sri Lanka, Kazakhstan or Malawi, with 630,000 approx eligible for iV
- 2023 General Elections, Pakistan’s electorate will approach 110m
- Potential users of Internet Voting similar to electorates of Tunisia, Rwanda, Zimbabwe, Cambodia or Senegal
1. Size/Scale/Scope – Online VR

Access i-Voting Website

During the Registration Phase

Account Creation
Name, NICOP, MRP, Valid Email, Mobile Phone, Country of Stay, Password

Confirm Account Creation
Confirmation link to enter Email, PIN, as received in email + CAPTCHA

Eligibility Check
- Full name, NICOP Number + Date of Issue, MRP number + Tracking Number
- CAPTCHA

Identity Verification
Answer questions regarding voter’s identity information

Successful Registration

No

3 Failed Attempts: NICOP restricted

Voter Passcode

Sent in email before Election Day
1. Size/Scale/Scope - Voting

- Login to i-Voting
  - Only successfully registered voters
- Enter Passcode
  - Sent in email after successful registration
- Select Voting category
  - National and Provincial Assembly
- Choose Candidate
  - Name, Political Party & Symbol displayed
- Vote
  - Click on the Vote button
- Select Another Category?
  - National / Provincial Assembly
- Confirmation Message Displayed
  - Sent in email before Election Day
2. Time

- 1993 – first petition to enfranchise OP
- 2011 Dr. Arif Alvi of PTI
- 2012 ECP mock postal/telephone OCV
- 2014 Islamabad High Court, PCER formed
- 2015 Imran Khan of PTI
- 2016 PCER sub-committee on OCV
- 2017 Elections Act passed
- 2018 Supreme Court of Pakistan directs ivoting system to be developed in 10 weeks
2. Time - continued
Supreme Court of Pakistan
Just do it.
2. Time - continued

- April 2018 – IVTF formed – elections in July
- Key findings:
  - No secrecy
  - Voter can change constituency of their vote
  - Ease of personation (fake email, fake website)
  - DDoS mitigation compromise possible
  - Insecure third party components (inc. CAPTCHA)
- SCoP rules that iVoting only for by-elections
- October 2018 – first deployment of i-Voting
3. Transparency/Opacity

- i-Voting system offers no E2EV and is, by design, not auditable
- IVTF had access, but time-bound
- System not subject to any external scrutiny
- ECP may include or exclude votes cast based on “its opinion”
- No process or criteria to elaborate how this opinion is reached
4. Secrecy/Coercion

- Constitution and Election Act require ballot secrecy
- i-Voting System does not include any mechanisms to address this.
- Social Media sharing of votes cast
- About half of Pakistan’s diaspora are manual labourers
- Aside from computer literacy and access issues, this demographic most vulnerable to coercion
4. Secrecy/Coercion - Twitter

Wajiha Hameed Sheikh
@wajiha_hameed

Am based in UAE and casted my vote online for #NA243 @AKFixit (Alamgir Khan) 🇵🇰 🇵🇰 looking forward to a tabdeeli in city Karachi 🤞
#ThankYouECP #ByElectionNA243

Naveed Kashif
@NaveedKashif

Finally It's Done.
#iVoting #NA63 #ByElections2018 #ByElections #PTI #Overseas

10/14/18, 12:35 PM from Dubai, United Arab Emi...

11:33 AM - 14 Oct 2018
5. Going Forward

- Law remains focused on i-Voting
- PCER inactive pending resolution of new appointments to ECP
- Recent by-elections have not seen i-Voting system in use.
- NICOP being abolished for labourers
- Multiple potential research efforts – User Interface, Authentication, Coercion-resistance, Cybersecurity; Compliance; DDoS; Legal Reforms; Materiality; EDR for i-Voting
Thank you!

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