## Random Sample Voting

Nicolas K. Blanchard, RSVP Team

IRIF, Random Sample Voting Project

Global Forum on Modern Direct Democracy 17th of November 2016

Introduction

Every citizen's opinion should count

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- Frequent votes should be the norm
- It should scale to all population sizes

Introduction

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Introduction

## Good news

## Good news

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## Good news

We can have all that!

## The Random Sample Voting Project Team

































Aggelos Kiayias Deborah Hurley James Honaker Neal McBurnett Peter Schwabe Emin Gun Sirer Filip Zagorski David Parkes Douglas Wikström Maciej Kosarzecki Markus Duermuth Michael Clarkson Richard Carback Pance Ribarski Alan Sherman Christof Paar David Chaum Hannu Nurmi Jeremy Clark Brian Sutin Mark Ryan Lirong Xia Paul Tylkin Nan Yang Konstantinos Patsourakos Pedro A. D. de Rezende Nicolas K. Blanchard Tomasz M. Wlisłocki Christopher Nguyen Douglas Wikström Bingsheng Zhang

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- Voting starts today at noon, ends tomorrow at 21:30
- Results on Saturday morning

# Two questions for you:

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- Should voting in national elections be compulsory?
- Should negative campaigning be prohibited?

# Random Sample Voting

Simple protocol introduced by D. Chaum

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- 2 Give them a ballot with a unique set of IDs

Random Sample Voting

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- Choose a random subset of the population
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- Publish results

Verifiable representativity of the population's wishes

Random Sample Voting

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- For a fraction of current costs

Three guarantees:

Random Sample Voting

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Random Sample Voting

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- No one can find who voters are
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- Voters can't prove they are voters

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- The votes cast were well recorded

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- The choice of voters was random
- The votes cast were well recorded
- The tally is correct

# How to vote in practice

How to vote

# The voting ballot

#### Random-Sample Voting Ballot

Copy Vote Code voted from other half here:

QUESTION: Should voting in national elections be compulsory?

VOTING TIME: 2:00PM UTC Tuesday 8 November 2016 through 4:25PM UTC Tuesday 8 November 2016 INSTRUCTIONS:

- Choose either half of this sheet randomly (ballot number and password are the same for both halves).
   Use a web browser to visit the webpage: http://wbb.rsvoting.org/rsv/vbb/gfndd2016test Your ballot number is your login: 00
- Your password is: empz-yjzb-lens-fehm

  When prompted, enter the vote code that is printed adjacent your vote.
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   You should discard or destroy at least the half of this sheet that you used to vote; it is recommended,
- however, that you keep the other half of this sheet and write down on it in the space provided your vote code for later use in the audit.

  Choice Vote-Code

Yes 8462-5623-2890 No 2267-1563-4324

> 7150-7176-8688 888-8787-8818

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AOLING TIME: 5:00PM UTC Treesday 8 November 2016 through 4:25PM UTC Treeday 8 November 2016
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Random-Sample Voting Ballot

## The voting ballot

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Yes	8462-5623-2890
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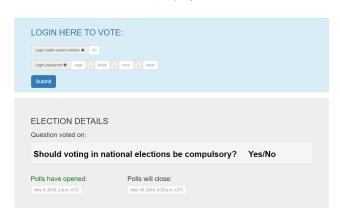
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## The online voting website

#### Voter Bulletin Board



### The online voting website

#### Enter vote-code to cast your vote!

×



You should discard or destroy at least the half-ballot with this vote-code on it. It is recommended, however, that you keep the other half-ballot and write on it, in the space provided, your vote-code for later use in audit.

Submit

# The online voting website



Properties

■ Indisputable tally

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- No fraud or vote selling

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- No coercion

Random Sample Voting

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- No fraud or vote selling
- No coercion
- Fully auditable

Ensured voting access

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- High turnout

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- Well-informed voters

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- Well-informed voters
- Harder to manipulate through advertising

#### Ellectiv

■ Easy to use, low cost

Random Sample Voting

## Effective

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- Frequent votes shape governance

#### Effective

- Easy to use, low cost
- Frequent votes shape governance
- Possibility of re-running if too close

# Conclusion

# Summary of RSV

- Secure, cheap and democratic
- Has been refined for the past few years
- Has been tested for security purposes
- Social consequences need more study

## Over the next three days

- Booth opens at 18:00 today to check the technology
- Shorter talk Friday at 13:50 about the audit process
- Workshop tomorrow at 15:30 to discuss social effects
- Results of the vote on Saturday at 11:00
- Don't hesitate to ask me for more information

#### The end

# Thank you for your attention Don't forget to vote!

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