Creating Testable Requirements
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What is a requirement?

• A requirement is a singular documented physical and/or functional need that a particular design, product or process must be able to perform.

• It is a statement that identifies a necessary attribute, capability, characteristic, or quality of a system for it to have value and utility to a customer, organization, internal user, or other stakeholder.
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Characteristics of a testable requirement

– Contextually specific
– Does not use adjectives
– Measurable
– Not procedural
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After the election, the e-pollbook must permit voter history to be quickly and accurately uploaded into the county voter registration system

- Quickly is not measurable
- Not all county VR systems are the same
- Mixing procedural with functional requirements
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For all text intended for voters or poll workers, the voting system shall provide a font with the following characteristics

- i. Height of capital letters at least: 3.0 mm
- ii. x-height of at least: 70% of cap height
- iii. Stroke width at least: 0.35 mm.
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• Contextually defined
  – …text intended for voters or poll workers

• Measurable
  – 3.0 mm
  – 70% of cap height
  – 0.35 mm

• Not procedural
A voting mark that touches a circle, an oval, or a square shall be counted as if it were on or in the circle, oval, or square. A voting mark that partially connects a connectable arrow shall be counted as if the voting mark completed the connection of the arrow.

Procedural
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Requirements development guidance

• Don’t use generalities when discussing specific components
  – Vote capture device instead of voting system
• Don’t use adjectives
• Include specific values and margins of error when appropriate
• Design requirements to support procedures and not to define them
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Questions?