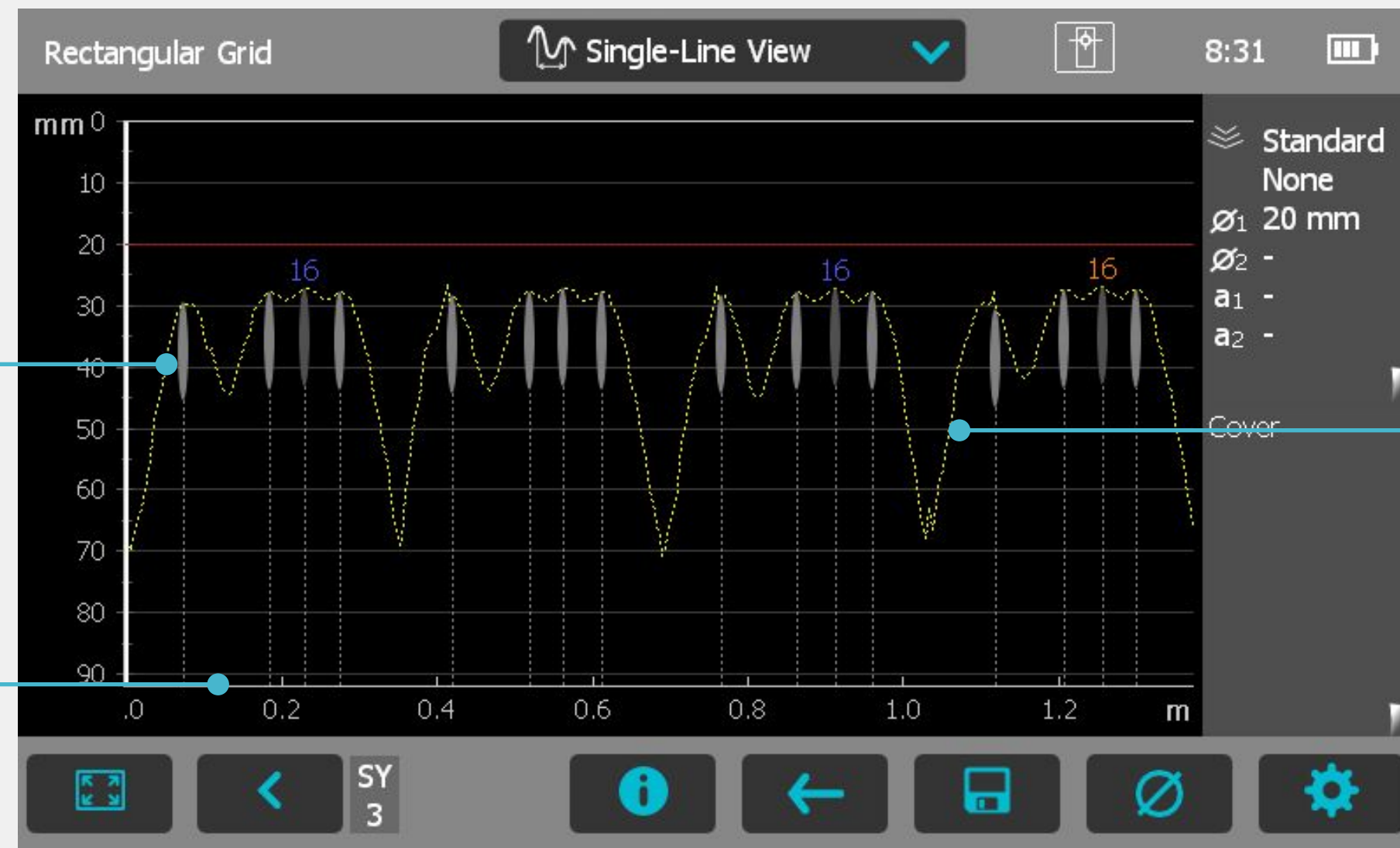# SCREENING EAGLE

Profometer

Fast and accurate Rebar Cover, Diameter Assessment
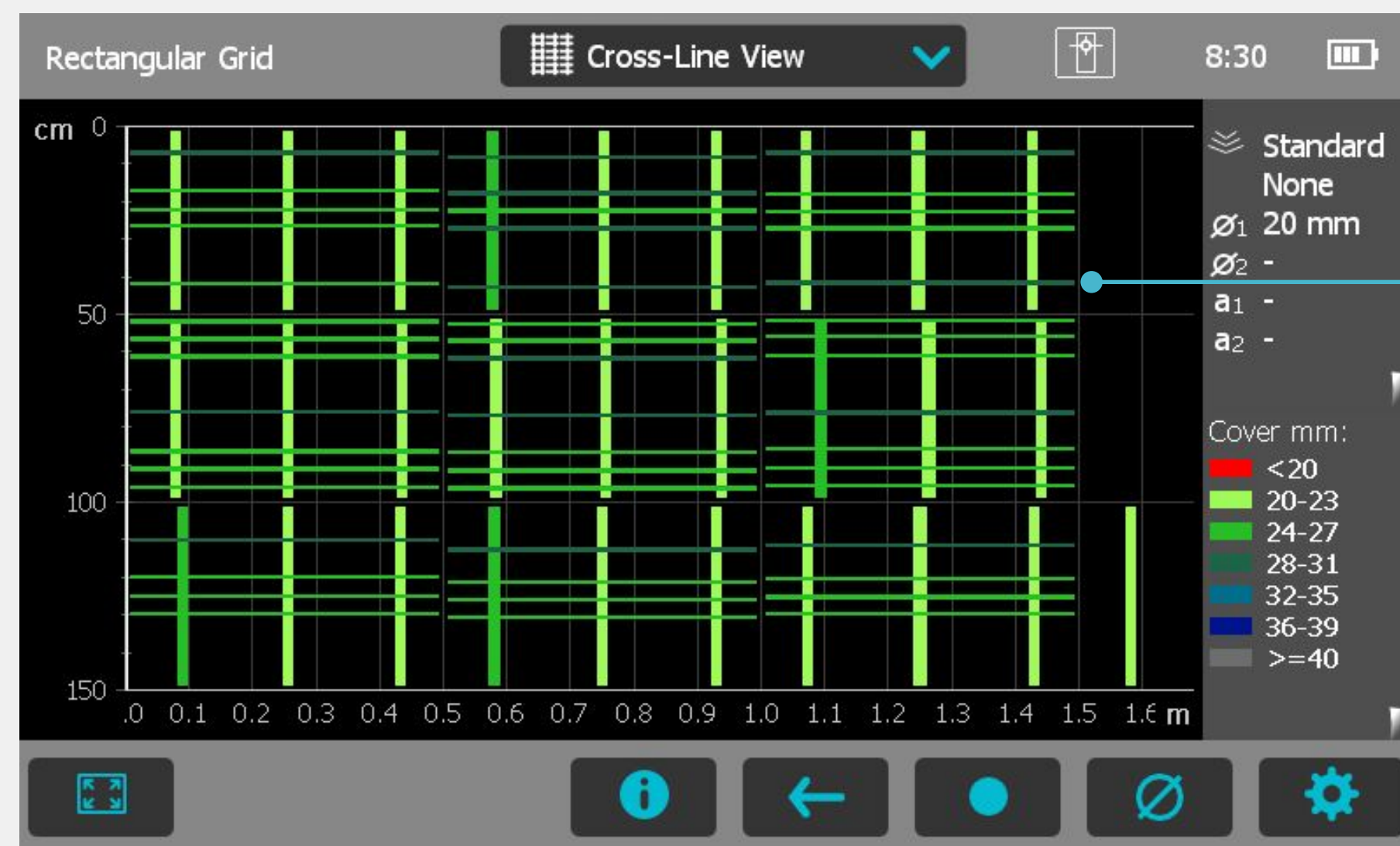
By Yichang

From

To

Problem with existing UI

Crucial information (cover thickness, rebar spacing) takes a lot of work to read.
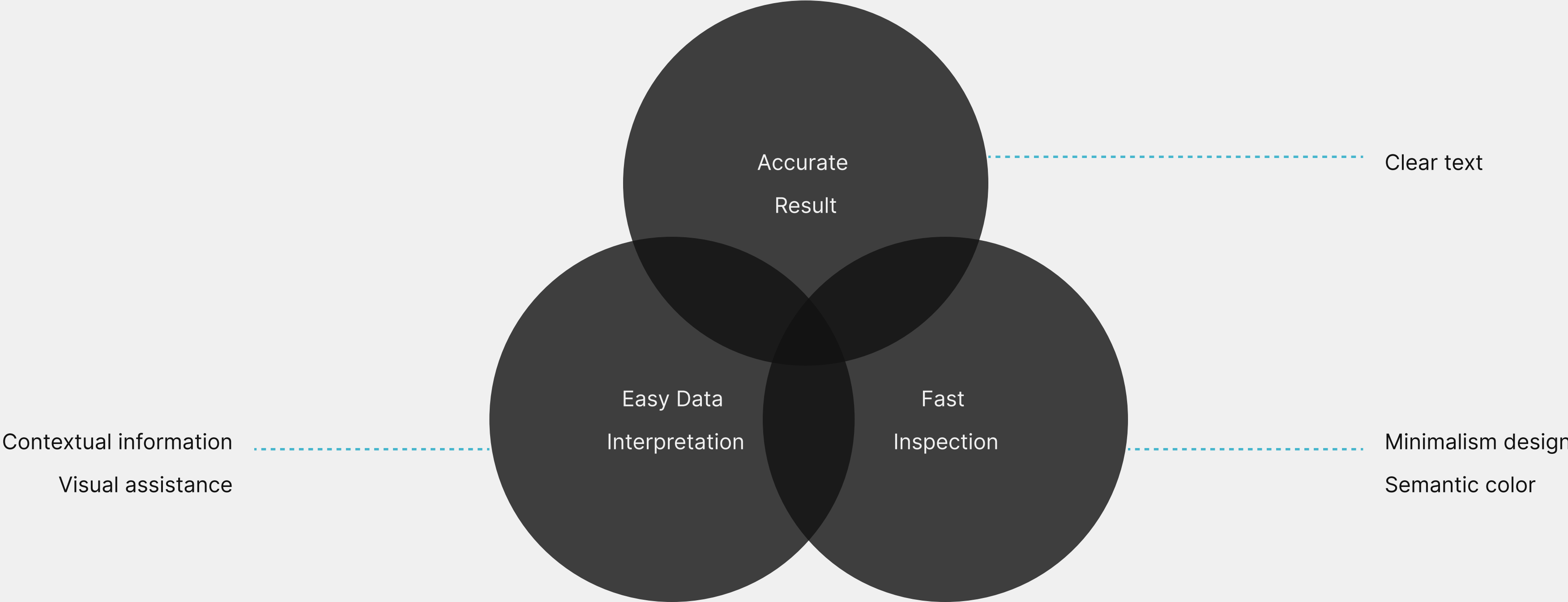
Information lacks context and is only for sophisticated analytics.

Second-layer rebars are too subtle The thinner liners are misleading.

User Needs

Accurate Result

Easy Data Interpretation

Fast Inspection

Clear text

Contextual information

Visual assistance

Minimalism design

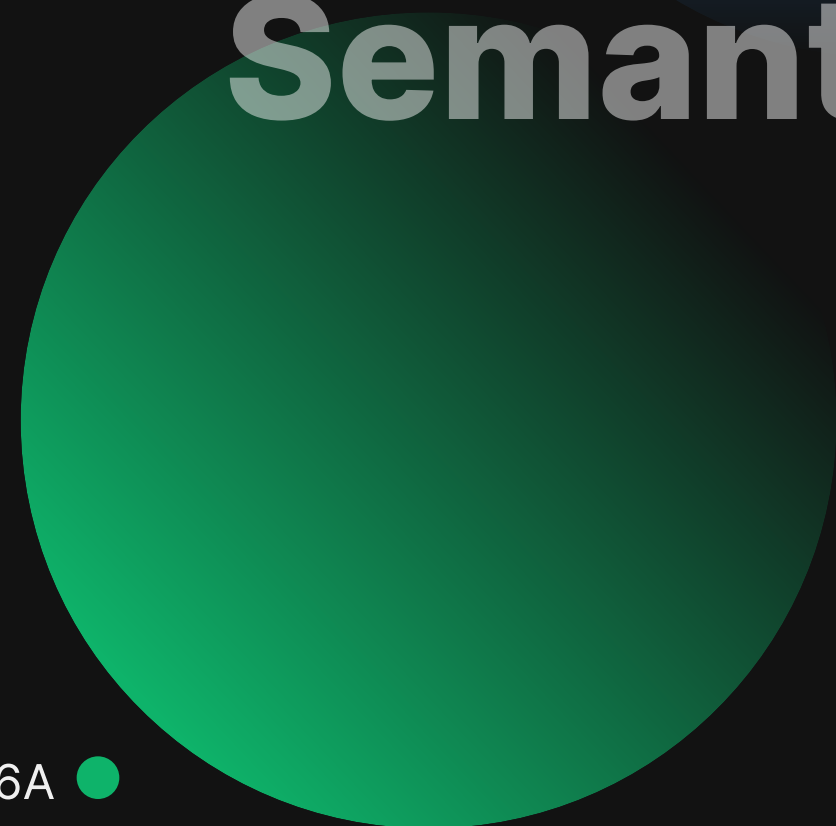Semantic color

Visual Design
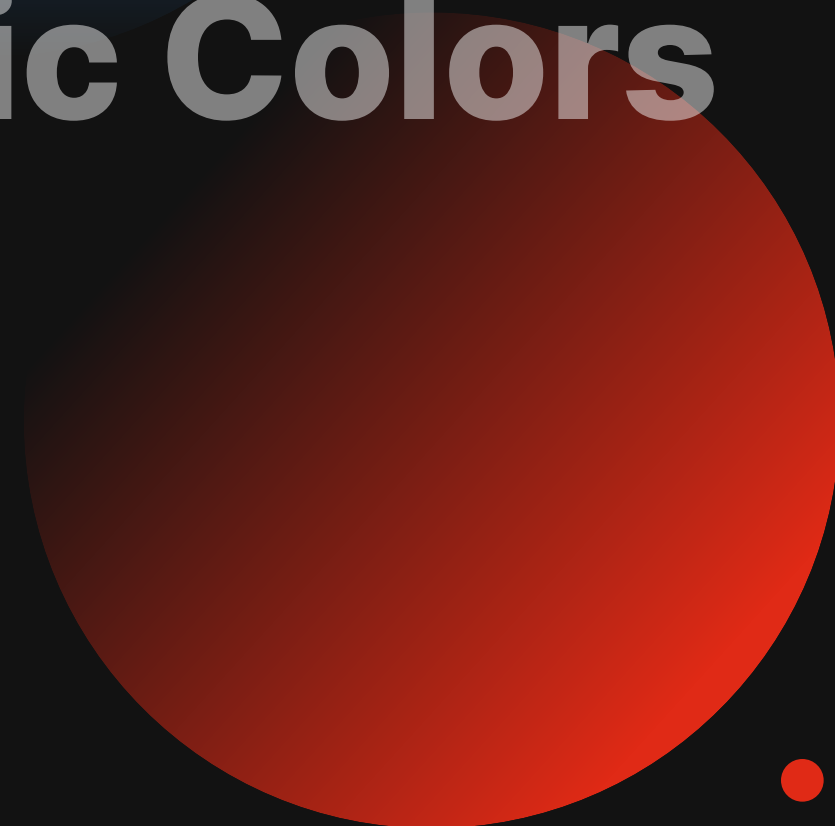
#3196F5

Semantic Colors

#0EB36A

#E02A16

Aa
SF Pro Text

Medium Subheadings

Aa Bb Cc Dd Ee Ff Gg Hh Ii Jj Kk Ll Mm
Nn Oo Pp Qq Rr Ss Tt Uu Vv Ww Xx Yy Zz
1234567890 ,.?()@'$%&#

Regular Body

Aa Bb Cc Dd Ee Ff Gg Hh Ii Jj Kk Ll Mm
Nn Oo Pp Qq Rr Ss Tt Uu Vv Ww Xx Yy Zz
1234567890 ,.?()@'$%&#

Icons

UI Components

Threshold Slider
Users can easily set the critical values by dragging the circle controllers or long press to input the exact number.

Line Number & Snapshot
An overview of the entire line scan. The white box highlights where the user is viewing.
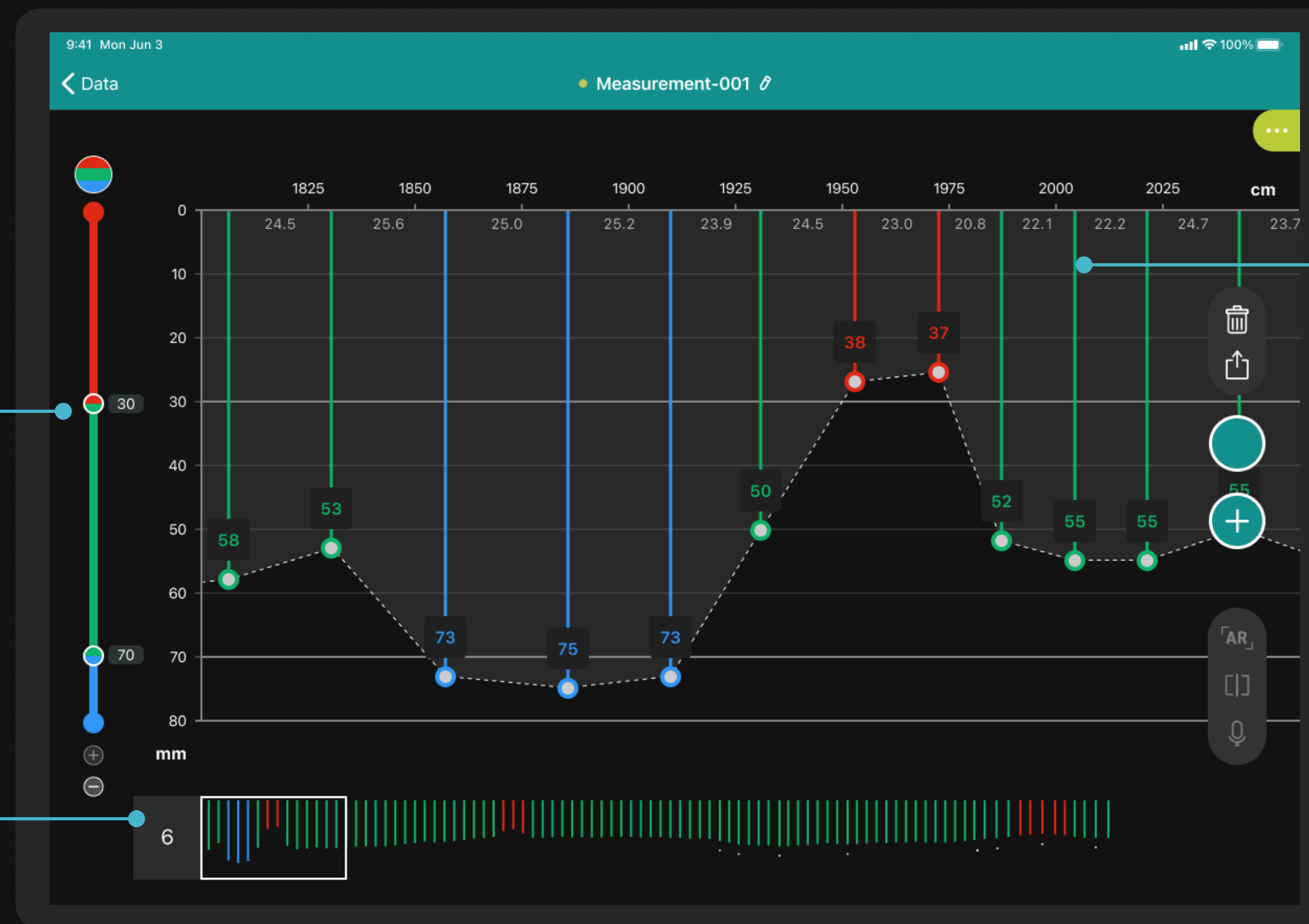
Rebar cover indicator
A line is drawn from the surface to the rebar, and the number indicates the distance between them. The component is color-coded based on the critical values set by the user for fast evaluation.

UI Components
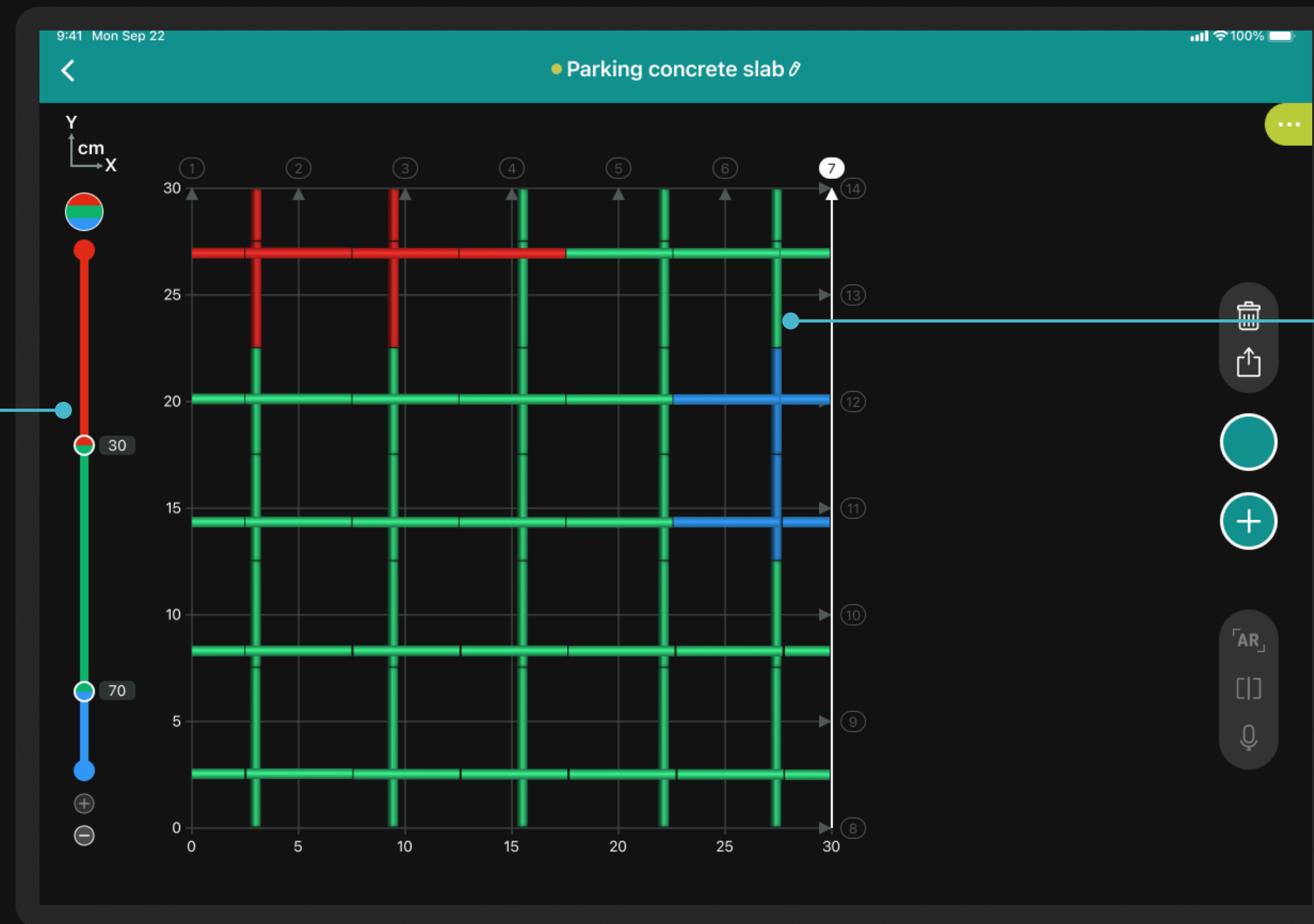
Threshold Slider
The same slider is used for area scan (top-down view)

Rebars with 3D effect
Gradient color is used to make the 3D effect and help users understand the rebars' structure.

Sound feedback was used to draw users' attention when there were important events, e.g., when a rebar was detected, when the scan reached the end of a line, when there was invalid data, etc.

Device Screens

A small screen was introduced to the device so that users could get quick feedback and operate the device without keep looking at the iPad app.

Start Up Screen

Calibration Warning Scr...

Calibration Warning Screen

Calibrating Screen

Power Off Warning Screen

Auto Power Off Warning Screen (battery used up)

Presets Screen (inch)

in   3.2   4.8   -

Preset Screen
· Unit in inch
· Minimum cover value
· Neighbouring rebar correction value
· Locate mode (no series number)

Presets Screen (mm)

mm   -   120   S0001

Preset Screen
· Unit in mm
· No minimum cover value set (off)
· Neighbouring rebar correction value
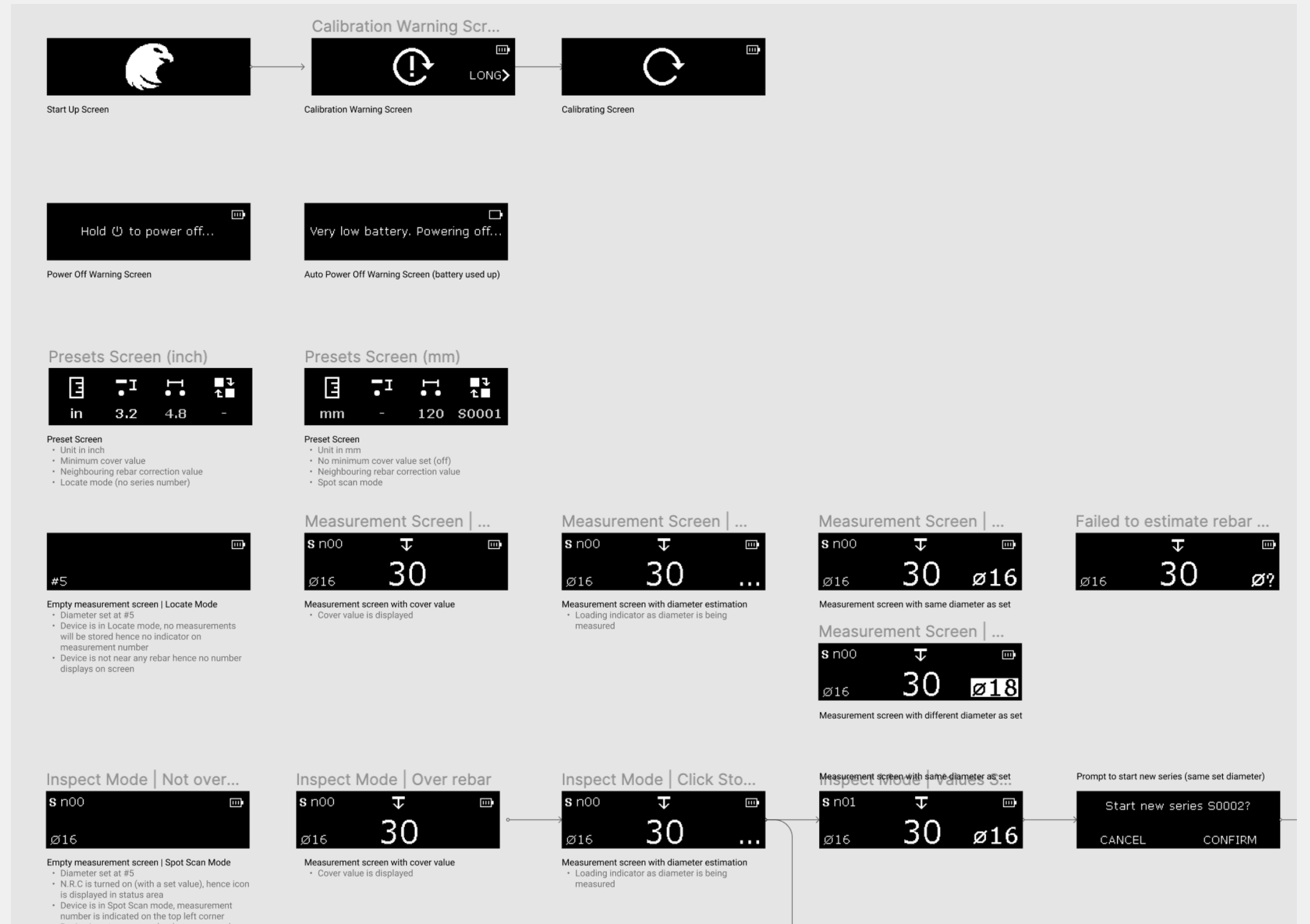· Spot scan mode

#5

Empty measurement screen | Locate Mode
· Diameter set at #5
· Device is in Locate mode, no measurements will be stored hence no indicator on measurement number
· Device is not near any rebar hence no number displays on screen

Measurement Screen | ...

s n00   Ø16   30

Measurement screen with cover value
· Cover value is displayed

Measurement Screen | ...

s n00   Ø16   30   ...

Measurement screen with diameter estimation
· Loading indicator as diameter is being measured

Measurement Screen | ...

s n00   Ø16   30   Ø16

Measurement screen with same diameter as set

Measurement Screen | ...

s n00   Ø16   30   Ø18

Measurement screen with different diameter as set

Failed to estimate rebar ...

Ø16   30   Ø?

Inspect Mode | Not over...

s n00   Ø16

Empty measurement screen | Spot Scan Mode
· Diameter set at #5
· N.R.C is turned on (with a set value), hence icon is displayed in status area
· Device is in Spot Scan mode, measurement number is indicated on the top left corner
· Device is not near any rebar hence no number

Inspect Mode | Over rebar

s n00   Ø16   30

Measurement screen with cover value
· Cover value is displayed

Inspect Mode | Click Sto...

s n00   Ø16   30   ...

Measurement screen with diameter estimation
· Loading indicator as diameter is being measured

Inspect Mode | Values s...

s n01   Ø16   30   Ø16

Measurement screen with same diameter as set

Prompt to start new series (same set diameter)

Start new series S0002?

CANCEL   CONFIRM

Thanks :)

Released on Oct 2022

https://www.youtube.com/watch?v=WpmufC0fqYA