Hydrographic Services and Standards Committee

HSSC6 INF1
Australian experiences deriving paper charts from ENC

HSSC 6

11-14 November 2014, Viña del Mar, Chile

Background:

- ✦ Limited and shrinking resources

  - Pre-2012:   150 positions across SOLAS, military charting, METOC and administrative roles (excluding ships)

  - 2014:   Currently 124 staff, shrinking further to under 100?

- ✦ Centralised database

  - Designed for parallel production of ENC and paper from common source data, but

  - obsolete, very slow using embedded software,

  - most production done using modern 'stand-alone' software using data extracted from the database to individual desktops until 2014,

  - very difficult to maintain alignment between ENC and paper charts.

- ✦ Bright idea: make one from the other !

External drivers:

✦ Pilotage

  – Electronic pilotage works much better with larger scale ENC
    than equivalent paper chart (Cross-track monitoring on screen)

✦ Outsourced chart production

  – Preparing packs of source data for outsourced work was difficult, but sending
    a complete S-57 dataset is easy

✦ Efficiency

  – Forecast reductions are dramatic, need to act while there are still enough
    staff left to undertake development

System solution:

- Modernising via modular replacement

  - Customised Notices to Mariners / ENC update tracking tool (2013)

  - Caris HPD (installed 2014),

  - Caris BDB, Base Editor, Paper Chart Composer (all pilot programs for implementation in 2015)

- Which chart type comes first?

  - Paper first? Can only make one ENC from one paper chart (resulting does not suit optimum electronic pilotage)

  - ENC first?   Can make several paper charts from one ENC (ENC can be optimised to suit electronic pilotage)

Challenges:

✦ Generalisation of contours and soundings

✦ ENC vs paper extent → Stitching together multiple ENC

✦ Existing methods of editing ENC within the AHS

 – we used to pass around the paper chart first for people to comment upon – highlighting errors was easy (draw an arrow on the paper chart)

 – How do you pass around an ENC for comment and mark up the features of concern?

✦ Gapping of linework?
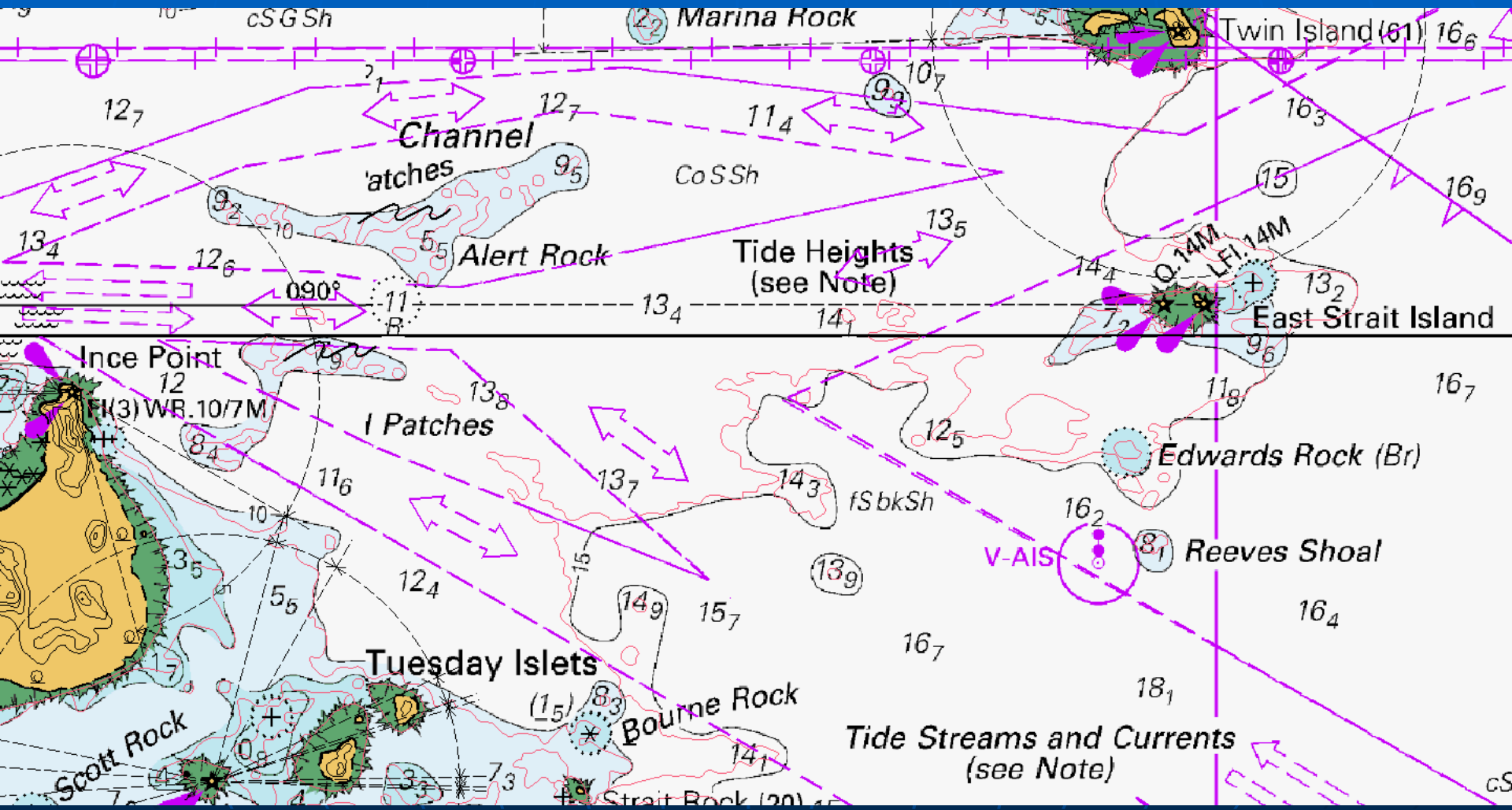
✦ Chart notes?

✦ Geographic Names?

✦ Cultural !

Contours:

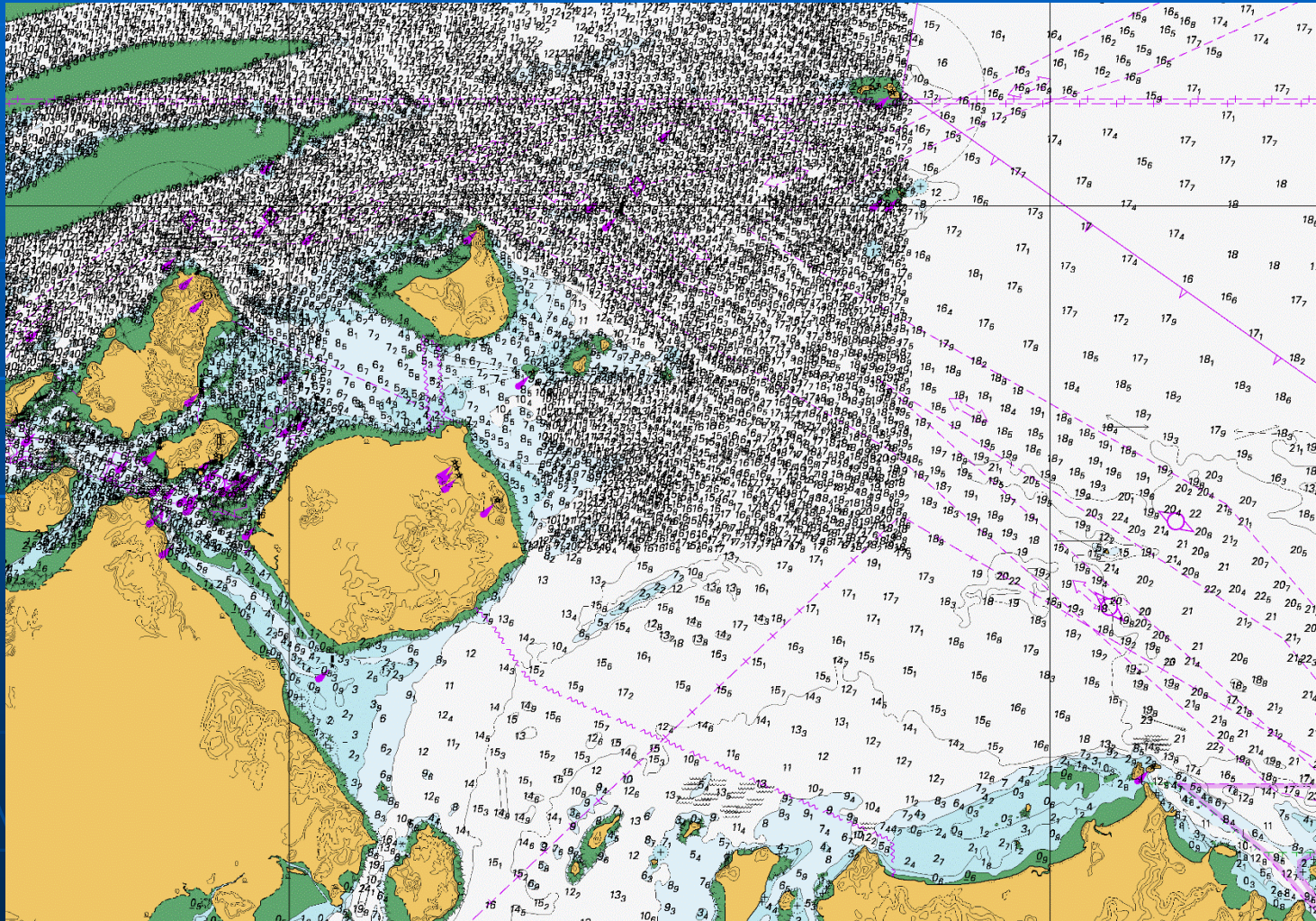✦ (Red = chart derived from ENC, black = existing paper edition)
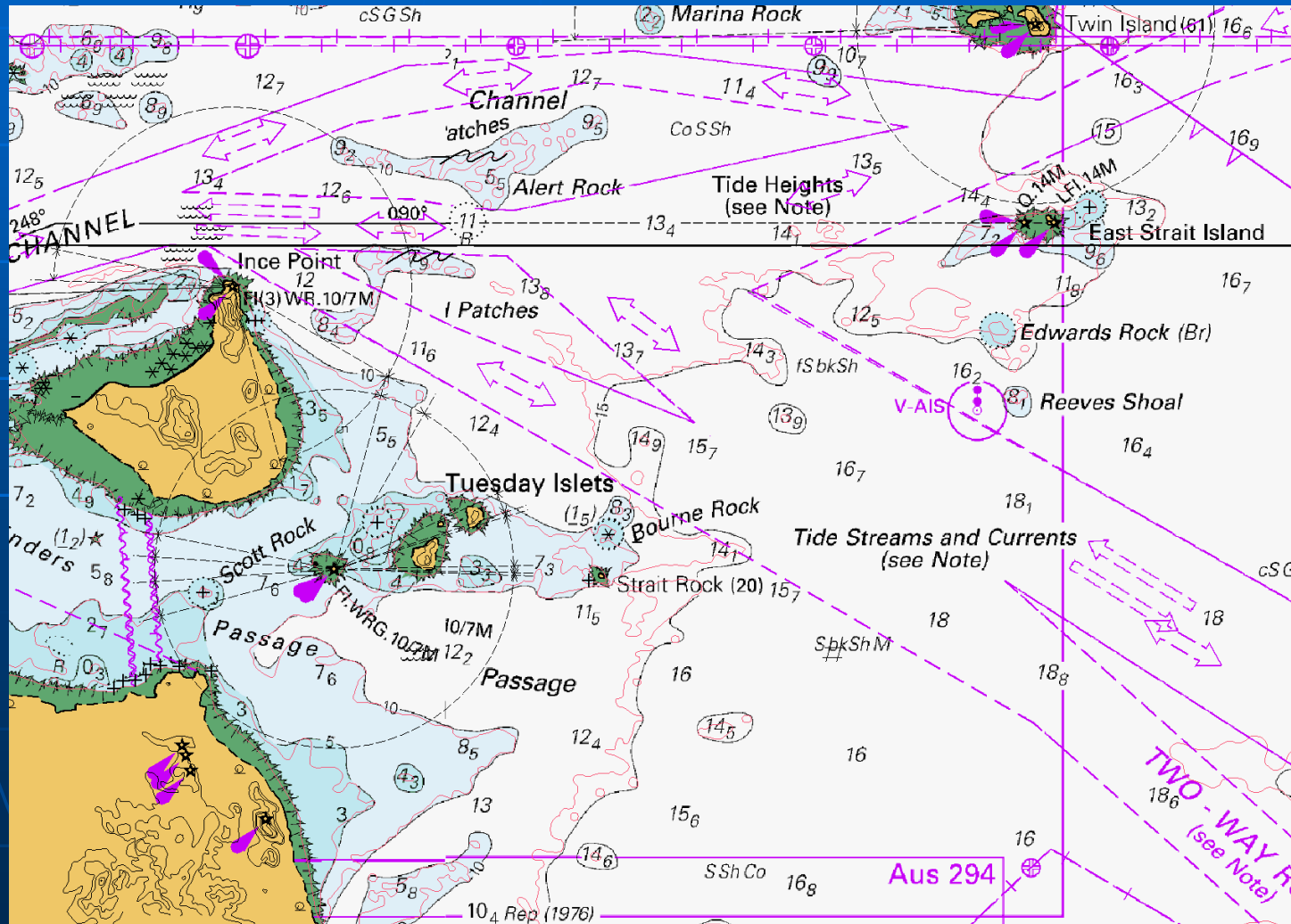
Contours:

- (Red = chart derived from ENC, black = existing paper edition)
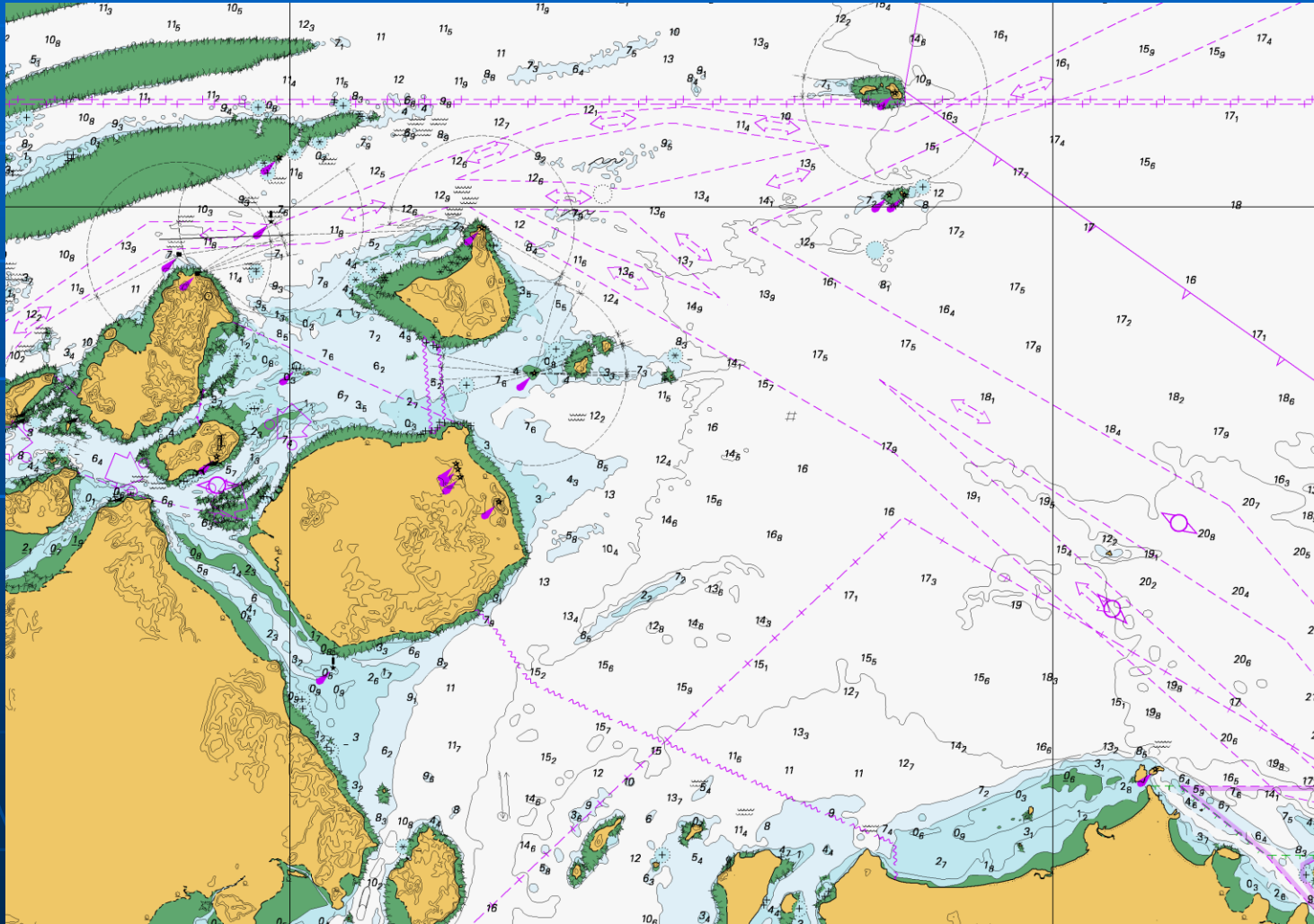
Soundings:

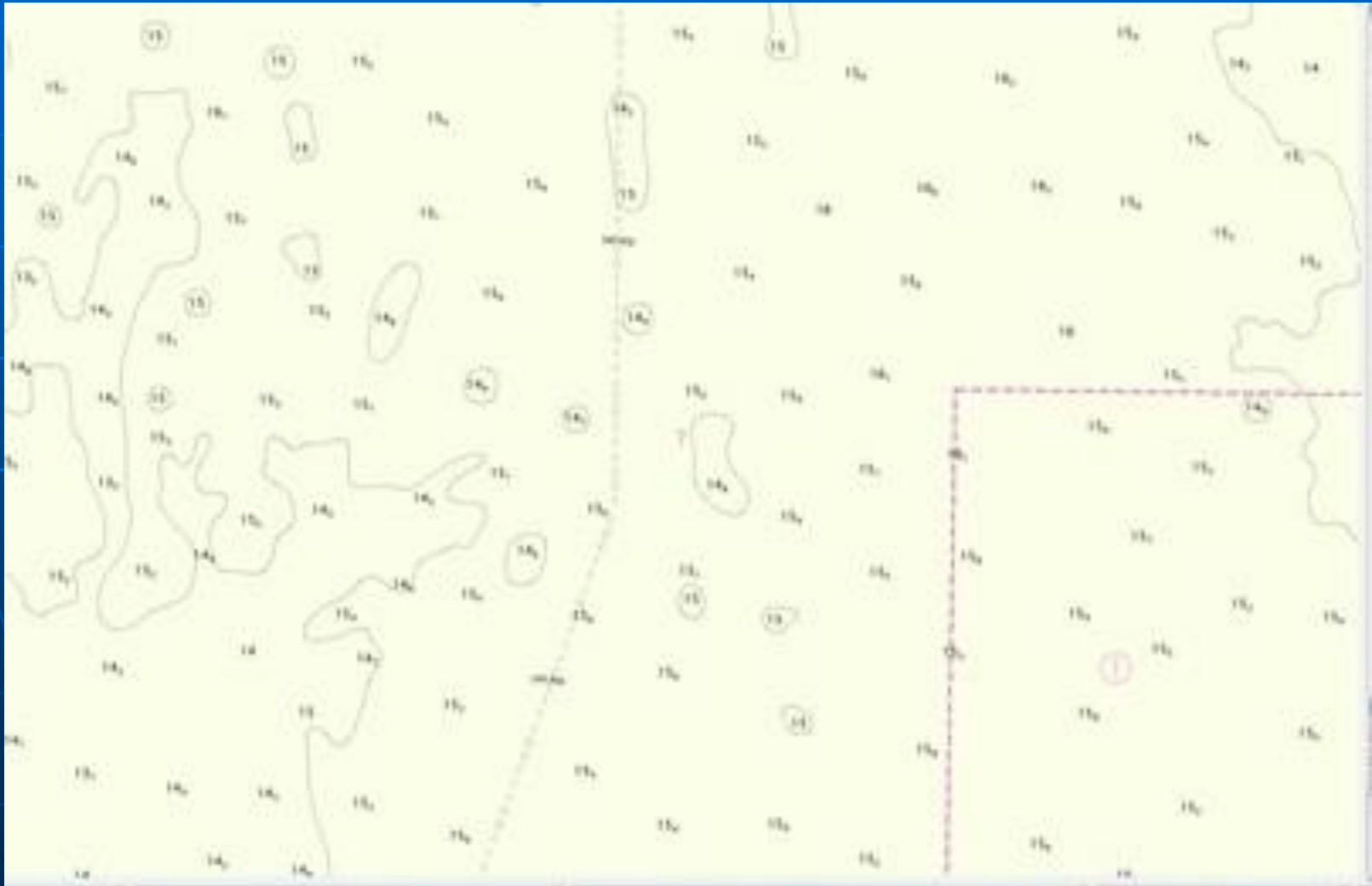+ Soundings from differing ENC compilation scales
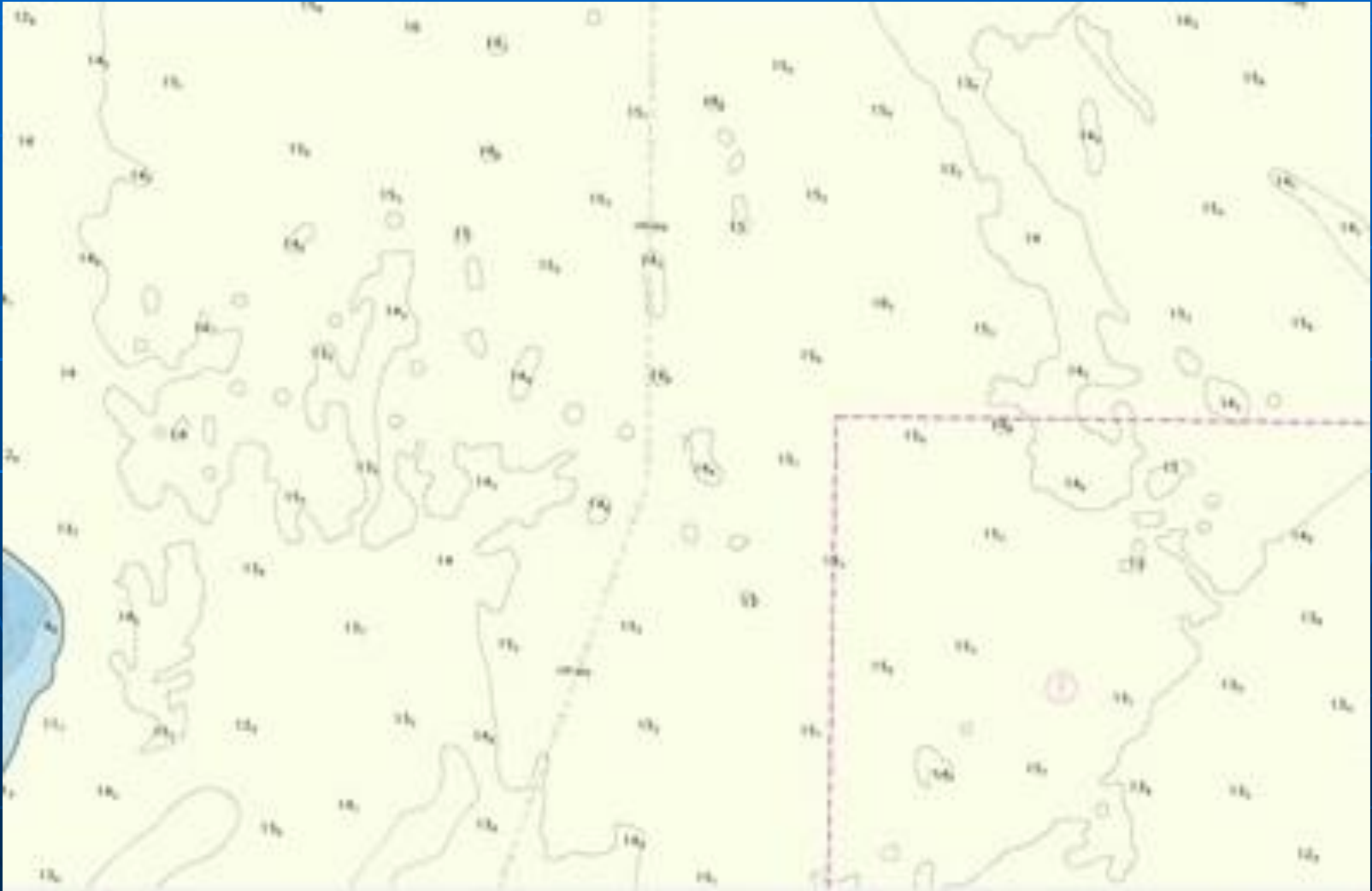
Soundings:

- Soundings selection → SCAMIN

How far can this go?

+ 1:12 000

How far can this go?

✦ 1:22 000 + SCAMIN

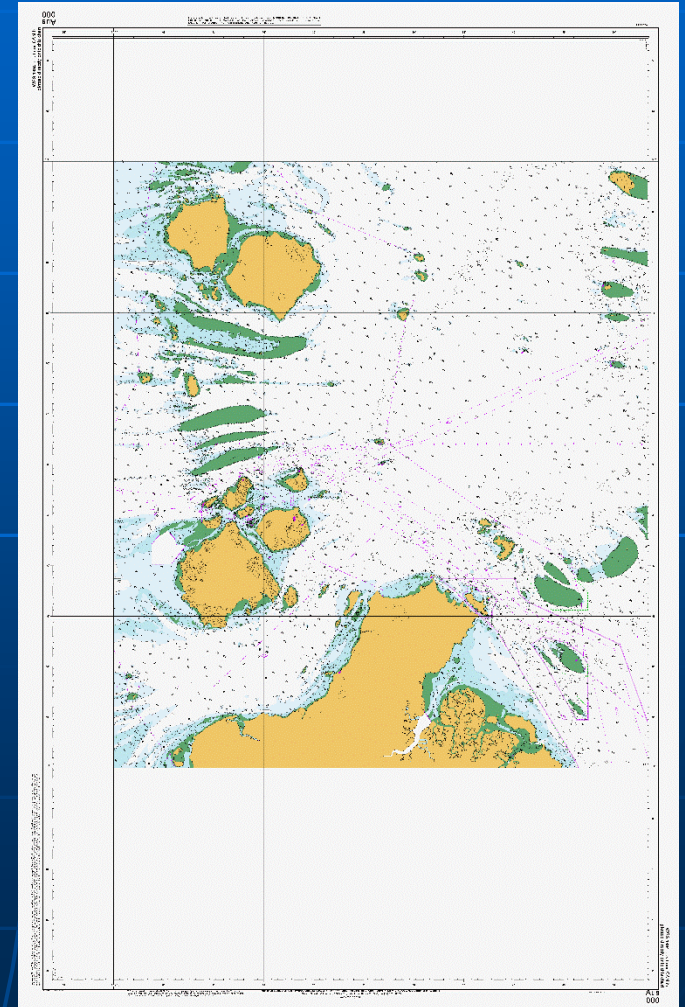# How far can this go?

- 1:45 000 + SCAMIN

How far can this go?

- 1:90 000 + SCAMIN

Other Challenges:

- ✦ ENC vs paper extent → Stitching together multiple ENC

- ✦ Visualising the result

Action requested of HSSC

- **Note** the Information Paper and presentation