



United States Department of Commerce
National Oceanic and Atmospheric Administration
National Ocean Service
Office of Coast Survey
Hydrographic Surveys Division
Atlantic Hydrographic Branch

NOAA's H-Cell Sounding and Feature Management

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NOAA

Miami, Florida

Tenix LADS Lidar 2008

Survey Scale Sounding Selection and Contour Generation

MetaObjects and Depth Areas

Survey Soundings Charted Soundings

Interface

Chart Scale Sounding Selection
Deconflicted with regard to
Survey/Chart Interface

Chart Scale Sounding Selection
Deconflicted with regard to
Survey Contours

Feature Management Process
with
Caris and NOAA Pydro

Feature Processing In
Caris S-57 Composer
and
Caris BDB Base Editor

Future Gains

Increases in AHB's productivity and rigor will rely to some extent on Caris' continued product advancements

- Capable semi-automated sounding selection/suppression final sounding process
- Process performance improvements
 - Multi-Res / Variable-Res grids-easier handling
- A robust well integrated feature management solution



Many Thanks!
Questions...

NOS Ping to Chart in 90 Days Goal



Tides	1 week
Field Processing / Report	3 weeks
Office Survey Review	3 weeks
Office Cartography and Approval	2 weeks
Hydro Survey Division Review	1 weeks
Marine Chart Division Application	3 weeks

NOAA H-Cell

...Is an S-57 chart
scale representation
of the survey results

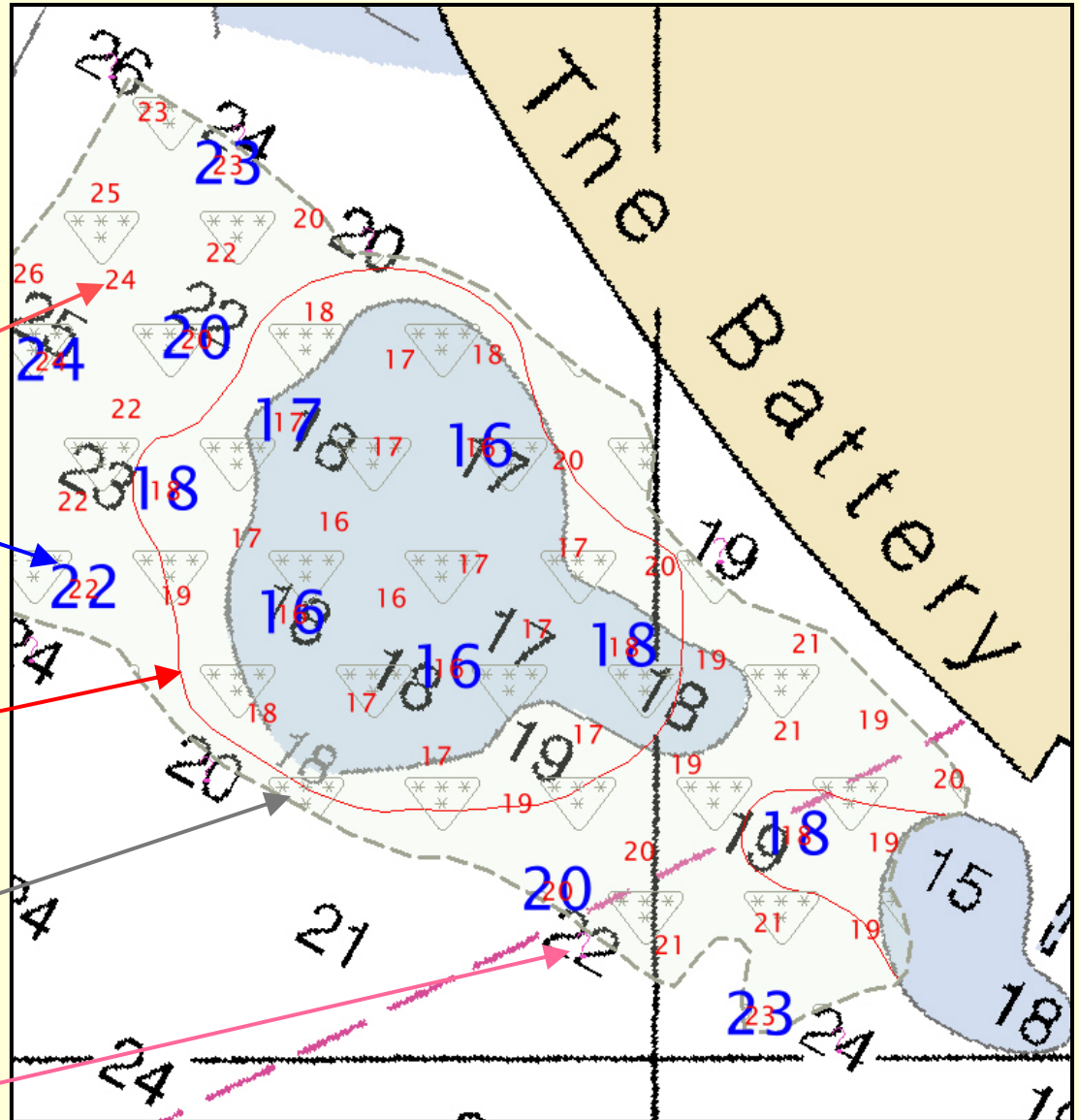
Survey Scale Soundings

Chart Scale Soundings

Survey Depth Contours

Meta Objects

Cartographic Notes



Incoming Surveys

**AHB
Check In**

**Survey
Acceptance
Review**

Reports

Soundings

Features

Contours

Carto Notes

Meta Objects

HOB Files

**Final
Compilation**

Review Process

**Comprehensive
Content Review
Process**

**AHB H-Cell
Workflow**

Review

Approval

**AHB SAR
Workflow**

Field Unit

AHB

**Approval
Letter
SAR
Checklist**

**Constructive
Feedback**

**Features
File**

Final Grids

Reports

**SAR
Checklist**

Queue

**Planning
Meeting**

**Pre-Compilation
Process**

H-Cells

Chart Scale.000

Survey Scale.000

Descriptive Report

HSD

MCD

**Raster
ENC**



Incoming Surveys

AHB

Field Unit

**AHB
Check In**

**AHB SAR
Workflow**

**Approval
Letter
SAR
Checklist**

**Constructive
Feedback**

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Acceptance
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Review Process

Approval

**Features
File
Final Grids
Reports
SAR
Checklist**

SAR Complete

Reports

HOB Files
Soundings
Features
Contours
Carto Notes
Meta Objects

**Comprehensive
Content Review
Process**

**Pre-Compilation
Process**

**Planning
Meeting**

Queue

**AHB H-Cell
Workflow**

**Final
Compilation**

Review

Approval

H-Cells

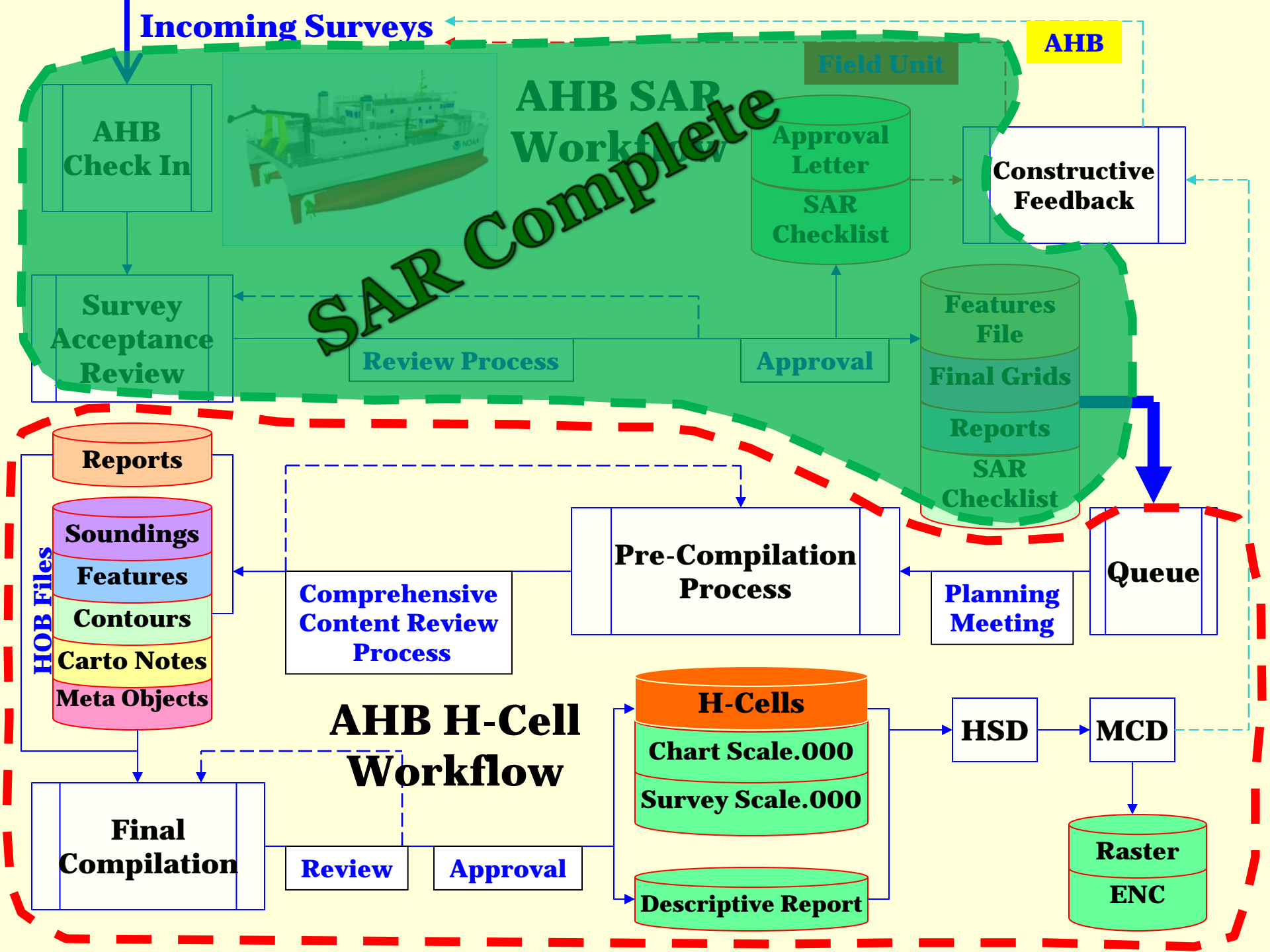
**Chart Scale.000
Survey Scale.000**

Descriptive Report

HSD

MCD

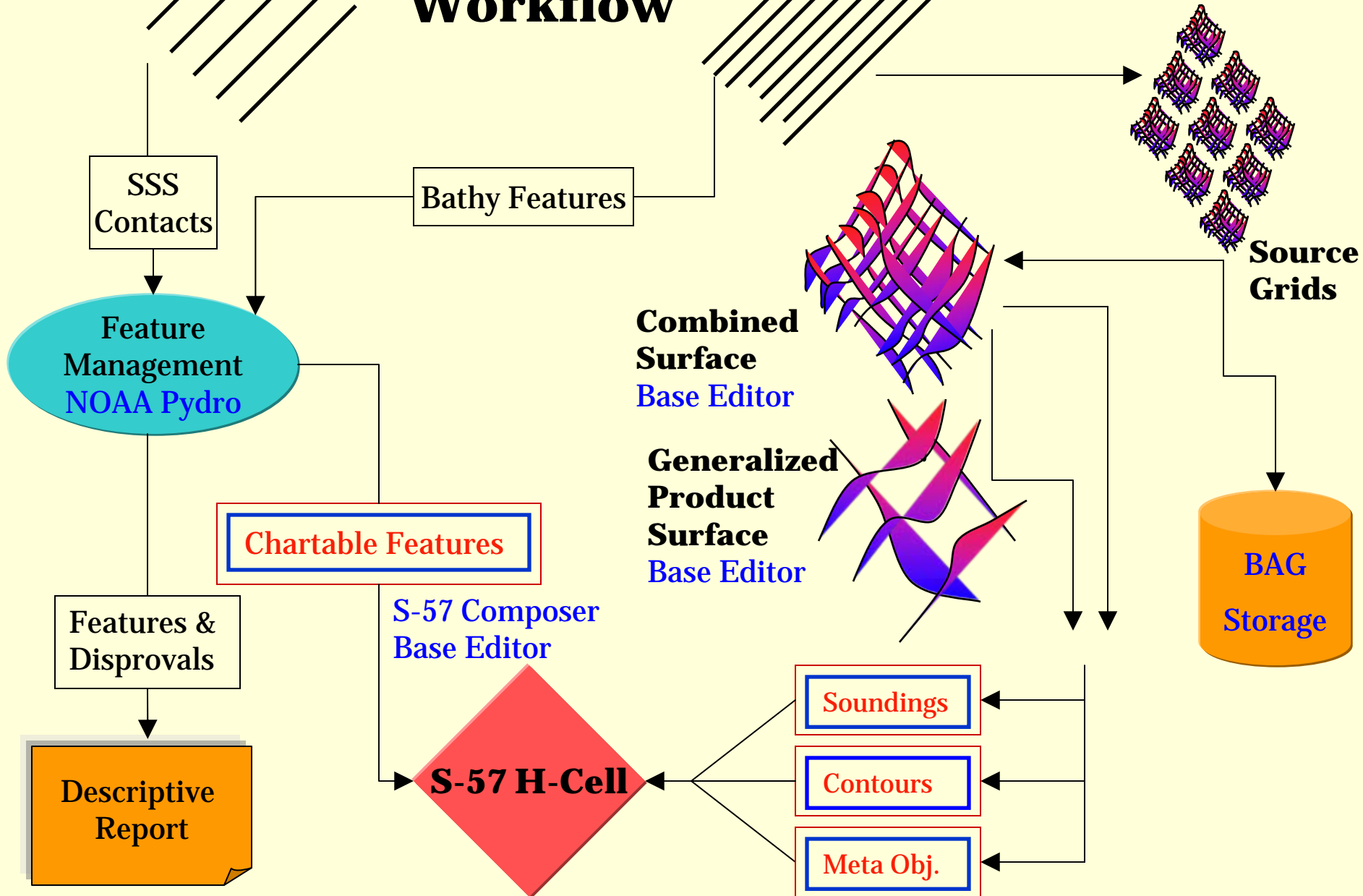
**Raster
ENC**



Imagery
SSS SIPS

AHB Processing Workflow

Bathymetry
HIPS



NOAA H-Cell Product Specification

S-57 Export Options

Product: NOAA H-Cell (H-Cell Product Specification)

Intended Usage: 4 - approach

Edition Number: 1

Issue Date: 7/ 1/2008

Vertical Datum: 16 - mean high water

Sounding Datum: 12 - mean lower low water

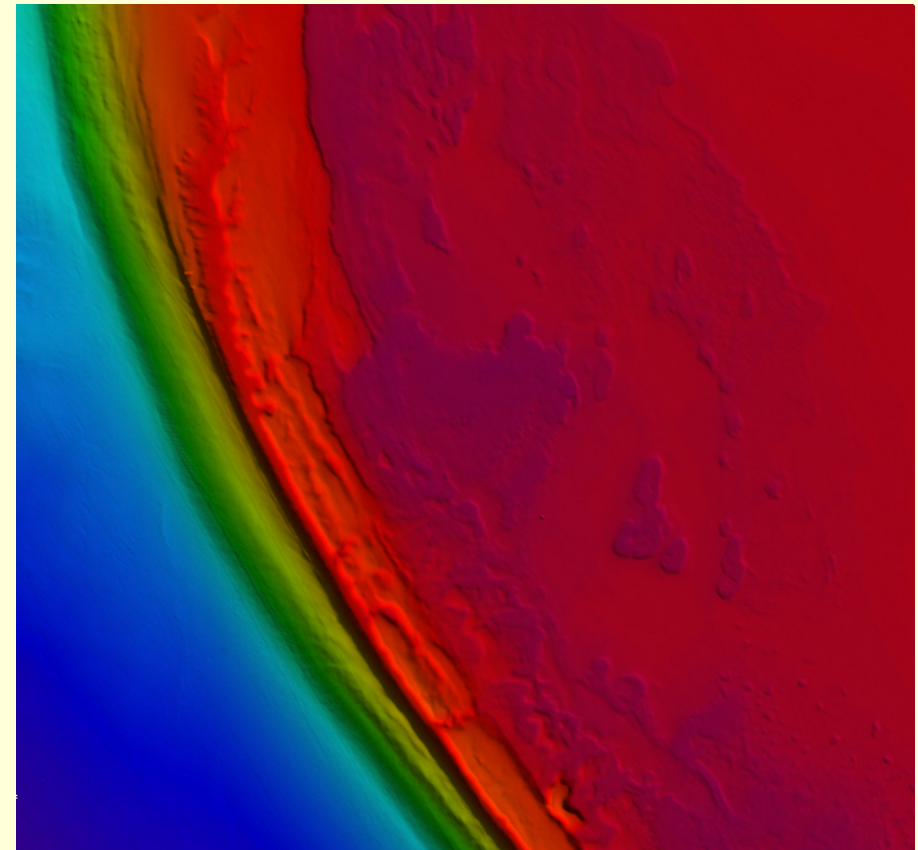
Compilation Scale: 10,000

Comment: Note: NOT FOR NAVIGATION.
This dataset is not an official S-57 ENC.

☐ Unicode National Attributes

OK Cancel

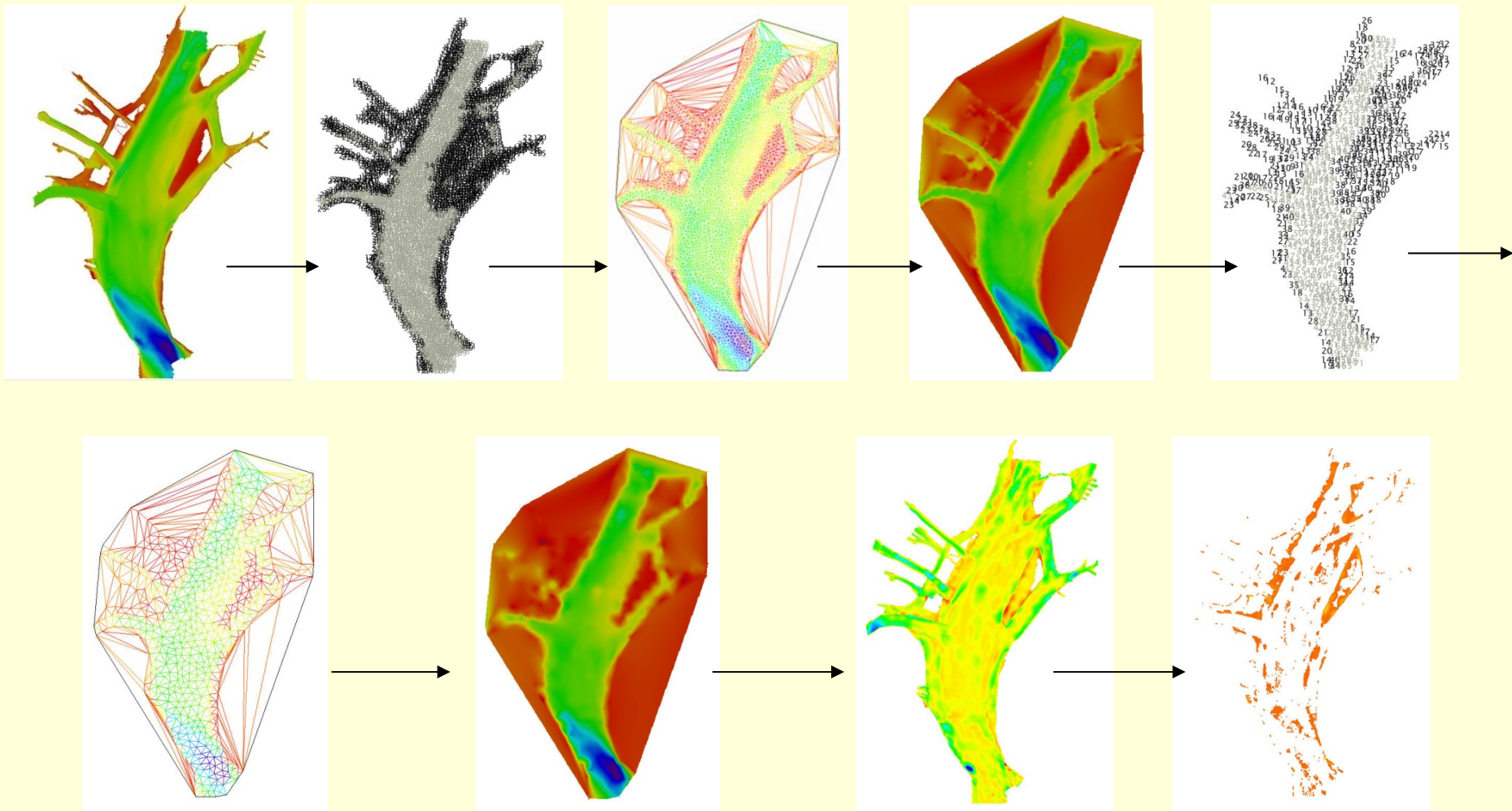
S-57 Mandatory Attributes



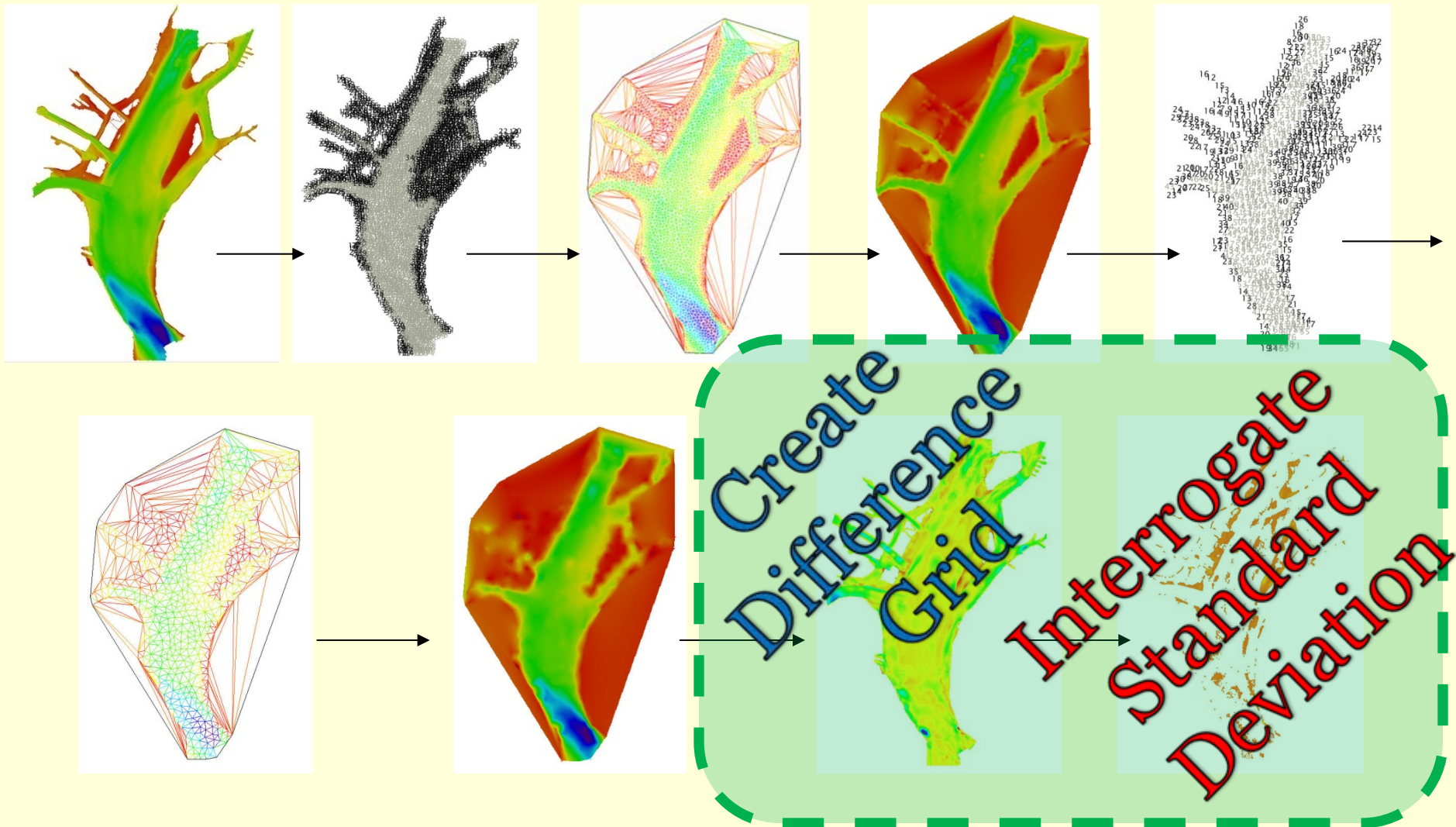
Selection			Attributes		
Feature ID	Acronym	Name	Acronym	Name	Value
US 00037...	M_QUAL	Quality of data	VERDAT	Vertical datum	
			POSACC	Positional accuracy	
			SURSTA	Survey date - start	20070415
			SORDAT	Source date	20070424
			SUREND	Survey date - end	20070424
			SORIND	Source indication	US,US,survey,W00183
			INFORM	Information	W00183, NF-07-06-USVI HAB, NOAA ship Nancy Foster
			CATZOC	Category of zone of	

Coordinates Features Spatial Attributes Attributes Components

Semi-Automated Chart Scale Sounding Selection Process Quality Control



Semi-Automated Chart Scale Sounding Selection Process Quality Control



Imagery
SSS SIPS

AHB Processing
Workflow

Bathymetry
HIPS

Slick I/O on
Front End

SSS
Contacts

Bathy Features

Combined
Surface
Base Editor

Source
Grids

Feature
Management
NOAA Pydro

No I/O on
Back End

Chartable Features

Generalized
Product
Surface
Base Editor

Features &
Disprovals

S-57 Composer
Base Editor

BAG
Storage

Descriptive
Report

S-57 H-Cell

Soundings

Contours

Meta Obj.

