



HydroCap® 5.1

ProCaptura's data capture system for hydrographic fair sheets

With this system you can capture the depth data from a hydrographic map. Depth curves and curve objects are vectorized, while soundings (depth values) are captured using OCR (Optical Character recognition). Soundings may be handwritten, scaled, rotated, signed or with position mark. The capturing is done in a semi automatic process. This means that the automatic processes are supervised by an operator which at any point can control the results and do corrections. The system has been used for years at our service center. The data capture speed and error rate has proven to be superior to manual digitizing.

Input:

- ☞ Scanned tiled binary raster file of maps/drawings/foils of fair sheets (alias field sheets) with sufficient resolution (preferably 3 pixels of line width). The map can contain soundings and/or depth curves, but may also contain other information
- ☞ Scanned originals in color or grey scale may be used as background in addition to the binary raster file
- ☞ TIFF files. TIFF files may be geo-referenced with a TFW file

Functionality:

- ☞ Handling of multiple image layers: working layer (binary), background layer (color/gray tone), info layer (binary)
- ☞ Configurable data model for point and curve objects reflecting special customer needs
- ☞ Automatic OCR classification of raster objects (single digits, symbols)
- ☞ Manual split and merge of raster objects
- ☞ Training environment for OCR classification of raster objects
- ☞ Interactive control of OCR results
- ☞ Automatic grouping of raster objects to soundings (multi-digit numbers, comma, minus, position marks)
- ☞ Parameters for generation of sounding position relative to grouped digits
 - ✘ At position mark
 - ✘ At decimal dot's position
 - ✘ At geometry of sounding with/without decimals and/or –
 - ✘ Center, Low Left, and others
- ☞ Automatic digitizing of curves, including

isobaths

- ☞ Interactive edit of curves (digitize, merge, split, line follower, insert/delete points, etc.)
- ☞ Interactive definition of depths on curves
- ☞ All automatic processes under operator supervision
- ☞ Operator controlled parameters for automatic processes, tailoring a production for a specific map or a series of similar maps
- ☞ Interactive consistency controls which guides the operator to problem areas
- ☞ Interactive definition of areas to be included or excluded from automatic processing. Can avoid uninteresting areas as legends, map frame, etc
- ☞ Interactive digitizing of point objects
- ☞ Comment objects to keep track of inconsistencies, exceptions and problem areas in the original map

Output:

- ☞ Soundings
- ☞ Depth curves
- ☞ Isobaths as soundings at regular intervals
- ☞ Curve and point objects without depths
- ☞ Objects as XY-coordinates with depth, either geo-referenced or as raster coordinates
- ☞ Output formats:
 - ✘ Shape
 - ✘ Generic ASCII
 - ✘ IRAP Classic (CFLOOR)
 - ✘ NSKV

Platform requirements:

- ☞ Microsoft Windows XP
- ☞ LINUX Red Hat Enterprise 4
- ☞ State of the art work station PC