THE KERN COMPUTER AIDED MAPPING SYSTEM

NEW DEVELOPMENT

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Since the last I.S.P. Congress in Hamburg, KERN & CO. has continued research and development on different modules of the KERN CAM SYSTEM. CAM - Computer Aided Mapping, was based from the very start on distributed computing, producing in KERN CAM format sequential ASCII text output files. The KERN CAM System evolution of the past 4 years is presented in the following summary:

NEW DEVELOPMENTS: INSTRUMENTATION.

1. DSR11   - Analytical stereo plotter based on the DSR1, featuring free hand guidance.

2. RM   - MAP revisioning module to project a graphic screen image into the left eyepiece of KERN stereo plotters.

3. ACOR   - Area correlator module for the DSR1 and DSR11. The main intention is to automate the model orientation and generation of digital terrain models.

4. CPM1 PLUS - Stereo comparator. The existing CPM1 has been enhanced with two more linear encoders for the right hand plate carrier.

5. PG21   - Analog stereo plotter based on the PG2, featuring focal length range of 85-215 mm and digital display for elevation.

6. GSD-2   - Digitizing table with gantry type cursor connected to DEC PDP11-23 computer.

7. KSIO-11   - Electronic interface (up/down counters) enabling the DEC PDP11-23 computer to read encoder signals directly.

8. MAPS300   - The interactive graphic station integrating an IMLAC

   HARDWARE   series II graphic screen and a DEC PDP11-23 computer.

NEW DEVELOPMENTS: SOFTWARE.

More programs were added to the already extensive software
stock. The following are some of the most important:

1. CRISP — Metric, non metric close range photogrammetry program, in cooperation with Graz Research Centre.

2. DTMCOL — For profile or grid mode DTM data collection.

3. CONTUR — Generation of contour lines, processing DTM data.

4. AETRI — On-line aerotriangulation with real-time editing features for model connections and schut polynomial adjustment. (For analog and analytical plotters)

5. BLUH — Bundle adjustment program adapted for KERN analytical plotters by the University of Hannover.

6. MAPS100 — For digital data collection with extensive feature coding and partial editing.

7. MAPS200 — For digital and/or graphic compilation with extensive feature coding and partial editing.

8. MAPS300 — Interactive graphics system for interactive editing of collected data in preparation for final plotting.

9. DATA BASE MANAGEMENT — Data management program of a project.

10. MAPR — Overall job management program.

11. CAMEDT — Clips lines creating clean intersections.

12. GRID — MAP sheet preparation.

13. PLOTR — Plots from KERN CAM format files.