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1. General

In the period from 1980 till 1984, between the ISPRS congresses of Hamburg and Rio de Janeiro, design work was concentrated on increasing value in use of the devices and equipments, by

- microprocessor control/computer control
- automatization
- increase of precision of optics and mechanics

Instrumental technique for

- aerophotogrammetry was extended
- terrestrial photogrammetry was extended
- remote sensing/multispectral technique was developed to a complete system
- image processing was newly adopted to the programm

2. Aerophotogrammetry/terrestrial photogrammetry

With regard to the terrestrial photogrammetry it was oriented towards a further completion of the system of terrestrial precision camera with the photo-size 13 cm x 18 cm.

The instrumental system now consists of four camera cones.

A photo-flight mount has been added to the well-known multivalent usable mounts. Furthermore a sheet film cassette has been developed as alternative to the roll film cassette and plate magazine.

A new generation of cameras was developed for the aerial photography with the LMK system. The image motion compensation applied provides a higher resolution capability of survey photographs. i.e. an improvement of image quality and therewith higher effectivity of photogrammetry. The LMK system consists of four camera cones.

For compilation the following instruments have been new or further developed:

- rectifier Rectimat C
- differential rectifier
 - . Topomat B with automatic image correlation
 - . Orthophot E (1983) for on-line and off-line operation with omega corrector in two modes of operation
- stereoplotter
 - . Technocart D for terrestrial compilation
 - . map revision device Kartoflex
 - . single stereoplotter Stereoplot
 - . analytical plotter Jena-Renault for terrestrial compilation
 - . analytical plotter Anacart, developed by HAI with Zeiss JENA
- digital drawing table, computer supported compilation technique
 - . digital drawing table CZT 90 x 120
 - . computer supported compilation systems CASP of Zeiss-Murai/Japan (1983)
 - . computer supported compilation system (1984)
- Software packages

3. Remote Sensing/Multispectral Technique

Since 1976 (MKF-6, MSP-4) Jena offers instruments and equipments for remote sensing. In 1984 the total system consists of a complete technological line of hardware and software basing on photographic cameras with high resolution capability and high geometric accuracy.

4. Digital image processing

In 1984 the following will be available for this technique:

- electrooptical sensing device ECAK
- image digitizing and generating device FEAG
- image processing devices BVS A 6471 - A 6473 from Robotron.