

CHAPTER 12  
CONCLUSIONS AND RECOMMENDATIONS



The Instrumentation Group was one of the smaller study groups in terms of manpower. The basic tasks of the group were initially defined as the installation and maintenance of the imported equipment, as well as training the operators. In practice, however, more than 75% of the Group's time was dedicated to:

(a) Adaptating the equipment to the conditions of operation in Brazil. Almost every piece of imported equipment had to be adapted to some extent to work well in the PICR test environment.

(b) Design and manufacture of original equipment to cope with new requirements that arose during the project. Examples include the survey vehicle; the traffic flow data logger; the recorder box; the tone-to-digital converter; the digital output unit for the Maysmeter and the PELID.

(c) Development of so called commercial instruments which proved in practice to be only prototypes. This non-anticipated activity caused the expenditure of a high number of man-hours in work and in communications with equipment manufacturers overseas to solve design problems in apparatuses that were vital for the data collection system, like the Profilometer and the Weigh-In-Motion System.

The activities (a), (b) and (c), described above, brought difficulties, challenges and additional work that were not anticipated by the project managers at the beginning of the PICR.

It is recommended, based on the experience acquired by the Instrumentation Group, that in projects with time constraints, like the ICR Research, the purchase of instruments not completely developed and tested be avoided. If this proves impossible, it is recommended that sufficient time be allocated to testing the instruments in the environment where they are going to operate before effectively initiating the data collection process.

The Instrumentation Group documented all its work by means of technical and operational memos that contain the Group's accumulated experience during the ICR Research. These memos, together with this Volume, allow anyone interested to know which instruments are recommended and which are not, and why, for each type of measurement.



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ICR RESEARCH

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