Gerardo Noriega, M.Eng., P.Eng.
Vice-President, R&D Manager
RMS INSTRUMENTS
1-6877 Goreway Drive
Mississauga, Ontario
L4V-1L9, Canada
rms@rmsinst.com

Communications Protocols for Graphic-Printers/Chart-Recorders in Networked Flight Inspection System Architectures.

ABSTRACT

For many years the graphic-printer/chart-recorder (GP/CR) has been integral part of most flight inspection systems (FIS), playing an important role in ensuring the overall quality and accuracy of the flight inspection mission. Recent technological advances in GP/CR technology – e.g., higher resolutions, faster print speeds and sampling rates, gray scale printing of images, general-purpose laser-quality printer emulation – allow much enhanced functionality of FISs in a variety of architectures. Further developments in GP/CR technology will see the incorporation of embedded network interfaces. This will in turn permit greater versatility in the context of FISs including, for example, one GP/CR accessed simultaneously by several hosts, one host simultaneously accessing several GP/CRs, remote monitoring and control, etc. Protocols implemented in legacy GP/CRs are inadequate for these tasks, as they are designed for point-to-point communications. In this paper we examine requirements and implementation issues of protocols for management of status, configuration and control of GP/CRs, which may operate over both point-to-point and networked environments.