1 Introduction

Scope and Purpose

This document specifies the X wire protocol for the X Image Extension (XIE). It defines the syntax, structure, and semantics of XIE protocol elements. It does not contain background material on imaging concepts that the protocol extension enables, nor does it contain any language specific bindings.

Terminology

This specification contains a certain amount of descriptive terminology that is commonly used within the image processing community. There is also parametric terminology that is used to describe the parameter types recognized by the core X protocol and the image extension protocol. The image extension protocol types are defined in this document.

Techniques

For some XIE operations, there are several recognized algorithms or *techniques* that offer varying tradeoffs between quality of results and performance. Also, in some cases, different techniques are required due to an image's class or content. To accommodate some flexibility in this area, such XIE operations accept a technique parameter. A description of the techniques specified in this document can be found in Appendix A. Individual implementations may extend XIE's capabilities by providing additional techniques to provide for particular market needs.

Service Classes

For some environments, such as simple document image viewing, the full set of services provided by XIE may include features that are not needed by the target applications. In such situations (particularly for entry-level monochrome displays), server implementors may wish to provide only a subset of the full XIE protocol.

Subsets are arranged in a nested hierarchy of *service classes*. Each service class includes all of the features of any subsets that it surrounds (similar to the layers of an onion). Thus, applications written to use a given subset of the protocol will function correctly when running on servers that implement an enveloping service class.

This version of the XIE protocol defines two class: the full protocol (***Full***), and a document imaging subset (***DIS***). Future versions of the XIE protocol may define additional service classes.

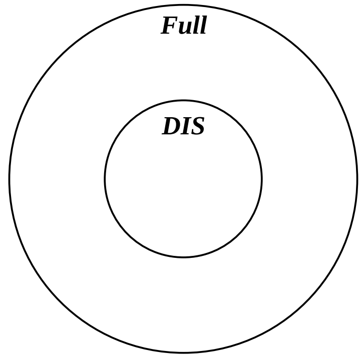

Figure 1-1 Service Classes defined in this document

For a complete list of types, techniques, protocol requests, pipeline elements, events, and errors that are included in ***DIS***, see Appendix B.