

The RFB Protocol

Tristan Richardson
Kenneth R. Wood
ORL
Cambridge

Version 3.3
January 1998

The protocol also makes the client stateless. If a client disconnects from a given server and subsequently reconnects to that same server, the state of the user interface is preserved. Furthermore, a different client endpoint can be used to connect to the same RFB

signed to make the job of the client as easy as possible. The bottom line is that the server must always be able to supply pixel data in the form the client wants. However if the client is able to cope equally with several different formats or encodings, it may choose one which is easier for the server to produce.

Pixel

4.3 RRE encoding

RRE stands for *rise-and-run-lend1emw-4(e)0(encoding)]TJ /F4 1 Tf 22.3267 0 TD [(-ans)-21(a)0(ds)-28(itsL)-252dimensionalEas-run-lend1emw46(e) RR-(encoedL)-252rLecstaglesLaresnotg*

5.1 Initial Handshaking Messages

5.1.1 ProtocolVersion

Handshaking begins by the server sending the client a *ProtocolVersion* message. This lets the client know which is the latest RFB protocol version number supported by the server. The client then replies with a similar message giving the version number of the protocol which should actually be used (which may be different to that quoted by the server).

5.1.2 Authentication

Shift right by *red-shift*.

AND with *red-max* (in host byte order).

Client to server messages

5.2.1 SetPixelFormat

Sets the format in which pixel values should be sent in *FramebufferUpdate* messages. If the client does not send a *SetPixelFormat* message then the server sends pixel values in its natural format as specified in the *ServerInitialisation* message (section 5.1.4).

Currently there is little or no support for colour maps. Some preliminary work was done on this, but is incomplete. It was intended to be something like this:

If *true-colour-flag* is zero (false) then this indicates that a “colour map” is

5.2.2 FixColourMapEntries

butOisOincompC liwintendedeO s0(om)5(ethinge)2401likeOtO

Currem24H there is little or n4supportefiorcColour SomlepCwokrw done

5.3.1 Framebuffer Update *FramebufferUpdateRequest*. I6ceis sentin response to *FramebufferUpdateRequest*

A framebuffer update consists of a sequence of rectangles of pixel data which the client

No. of bytes	Type	[Value]	Description
	CARD	<8n>	<i>background-pixel-value</i>

where n is the number of *bits-per-pixel* as agreed by the client and server – either in the *ServerInitialisation* message (section 5.1.4) or a

5.3.3 Bell

5.3.4 ServerCutText

The server has new ASCII text in its cut buffer. End of lines are represented by the