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R-Type protocol

Abstract

This document specifies an Internet protocol for the R-Type game. Distribution of this memo is unlimited.

Status of This Memo

This is an Internet Standards Track document.

This document is a product of the Internet Engineering Task Force (IETF). It represents the consensus of the IETF community. It has received public review and has been approved for publication by the Internet Engineering Steering Group (IESG). Further information on Internet Standards is available in Section 2 of RFC 5741.

Information about the current status of this document, any errata, and how to provide feedback on it may be obtained at http://www.rfc-editor.org/info/rfcunreferenced.

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1. Introduction

The R-Type we will refer to in this memo is a video game copy of the actual R-Type game produced by Irem in 1987. From now on, any mention of R-Type will refer to the copy one unless it is specificaly said otherwise.

R-Type is an online shoot-em-up game that can be play from 1 to an infinite number of player. It requires a server and a client to be played with.

R-Type is strictly using the UDP protocol as defined in RFC 768 [RFC0768].

The maximum number of players required to play a map depends of the map.

The goal of this memo is to keep track of the R-Type protocol.

2. RFC Editor’s Philosophy

Since this document is very likely not to be read by anyone else, the philosophy of this memo is "do enough but not too much".

3. Conventions Used in This Document

The key words "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT", "SHOULD", "SHOULD NOT", "RECOMMENDED", "MAY", and "OPTIONAL" in this document are to be interpreted as described in BCP 14, RFC 2119 [RFC2119].

4. Definitions

Every variable MUST be in little endian and MUST have the following form.

ID	GameID	Size	Datas
uint16	uint32	uint16	Size * uint8

ID MUST be an uint16. Each packet as an unique ID.

GameID MUST be an uint32. Each game room on the server as an unique GameID.

Size MUST be an uint16. Size is the actual octet count of Datas.

Datas has different interpretations depending on the ID.

For better clarification the following packets tables will only describe the Datas of the packet.

4.1. Default Types Used

If no mention converning a variable is made to its type then it refers the default matching type of this section.

A size, either a byte size or an array size, MUST be an uint16.

SizeOfArray MUST be the number of case of an array. It MUST NOT be its byte size. It MUST be followed by the array it is linked to.

An array MUST be represented with end square brackets. The size MAY be writen into the brackets.

A structure name MUST end with underscore and ’t’ ("_t") characters.

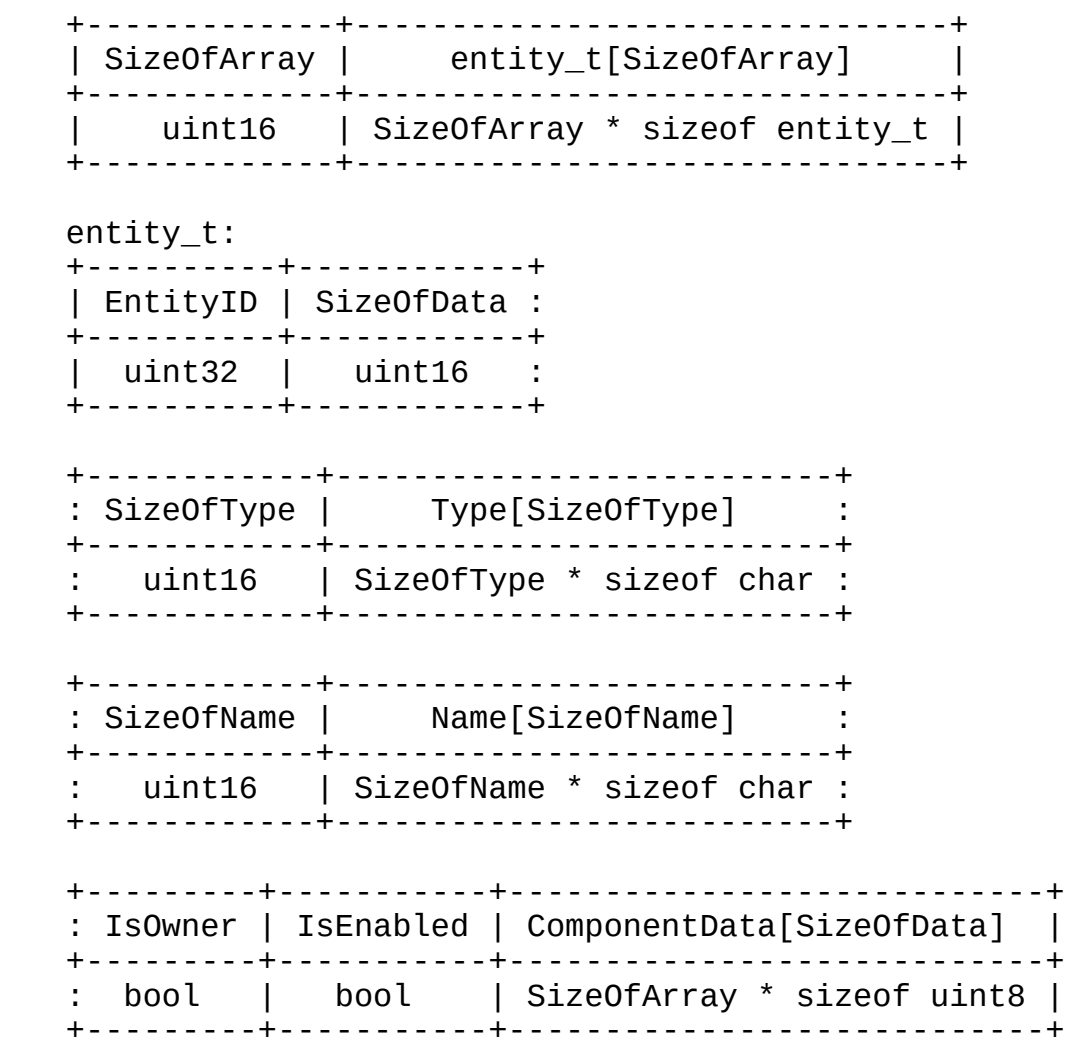
A bool is an uint8 value, equal to zero (false) or non-zero (true)..

4.2. Update Entities

ID: 10

Update Entities contains entities from an "Entity Component System". It sends the shared entities possessed by the sender to a receiver.

An Update Entities packet is an array of entity_t.



5. Security Considerations

Anybody can join any game. This protocol is inadequate to a large community of players. Admins SHOULD find a way to communicate with their community using IRC or another kind of open chat system. Indeed, without further indications, a player has no way to know if a room exist or not.

6. Contributors

Paul-Maxime Le Duc contributed largely to the thinking of the protocol.

7. References

7.1. Normative References

[RFC0768] Postel, J., "User Datagram Protocol", STD 6, RFC 768, August 1980.

[RFC2119] Bradner, S., "Key words for use in RFCs to Indicate Requirement Levels", BCP 14, RFC 2119, March 1997.

[RFC2578] McCloghrie, K., Ed., Perkins, D., Ed., and J. Schoenwaelder, Ed., "Structure of Management Information Version 2 (SMIv2)", STD 58, RFC 2578, April 1999.

[RFC2579] McCloghrie, K., Ed., Perkins, D., Ed., and J. Schoenwaelder, Ed., "Textual Conventions for SMIv2", STD 58, RFC 2579, April 1999.

[RFC2580] McCloghrie, K., Perkins, D., and J. Schoenwaelder, "Conformance Statements for SMIv2", STD 58, RFC 2580, April 1999.

7.2. Informative References

[RFC2223] Postel, J. and J. Reynolds, "Instructions to RFC Authors", RFC 2223, October 1997.

[RFC3410] Case, J., Mundy, R., Partain, D., and B. Stewart, "Introduction and Applicability Statements for Internet-Standard Management Framework", RFC 3410, December 2002.

[RFC2629] Rose, M., "Writing I-Ds and RFCs using XML", RFC 2629, June 1999.

[RFC4181] Heard, C., "Guidelines for Authors and Reviewers of MIB Documents", BCP 111, RFC 4181, September 2005.

7.3. URL References

[idguidelines] IETF Internet Drafts editor, "http://www.ietf.org/ietf/1id-guidelines.txt", .

[idnits] IETF Internet Drafts editor, "http://www.ietf.org/ID-Checklist.html", .

[xml2rfc] XML2RFC tools and documentation, "http://xml.resource.org", .

[ops] the IETF OPS Area, "http://www.ops.ietf.org", .

[ietf] IETF Tools Team, "http://tools.ietf.org", .

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