AaS Protocol – AaSP

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1 Introduction[1]

1.1 Purpose

The Annotation as Search Protocol (AaSP) is an application-level protocol for communication of an AaS server and an AaS client. The purpose of this communication is described in the AaS specification.

1.2 Protocol compliance

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 RFC 2119.[2]

An implementation of the AaSP is called compliant if and only if it satisfies all of the requirements marked by the key words "MUST", "SHALL" or "REQUIRED". Furthermore, implementations are encouraged to comply to the recommendations marked by the keywords "SHOULD" and "RECOMMENDED" if they are suitable to the respective application.

1.3 Overall Operation

The client initiates the AaSP communication by sending a message of the type *request* to the server. The server then build a forest of annotated trees from the request, generates a question, and reponds to the client by sending a message of the type *question*. The client answers the question as true or false and sends an *answer* message to the server.

When receiving an *answer*, the server filters its forest to only retain the trees which satisfy the given answer. If only one tree remains, the server sends the remaining tree to the client in a *solution* message. Otherwise it sends a *question* message again.

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[1]This section heavily borrows from the Introduction to the specification of the HTTP as given in RFC 2616. https://www.w3.org/Protocols/rfc2616/rfc2616-sec1.html

[2]https://www.w3.org/Protocols/rfc2616/rfc2616-sec1.html

At any time, the client may send an *abort* message to end the communication prematurely, or it may send an *undo* message to revoke one or more of the answers given previously.

If the server encounters an unexpected situation it may send an *error* message to the client.

2 AaSP Messages