

Extension to openIGTLink; XML as message, error handling, logging, and one-to-multi relaying

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#### Abstract

We plan to extend openIGTLink with following useful features; 1) XmlMessage class to handle an XML text message, 2) ComAgent class to replace Socket class for better communication with try-catch implementation. Using this extension, we will implement a data-logging center that can relay the data to multiple clients.

This will impact the following 1) arbitrary format of data transfer by formatting an XML, including MRML data transmission via openIGTLink, 2) a pair of agent takes care of establishing, maintaining, terminating the communication channel, as well as attempting re-connection in case of network trouble, 3) modern error handling, 4) data logging by XML format in an SQL database, 5) one-to-multi data distribution. The work is yet in an early stage of implementation and a simple client example will be demonstrated.