

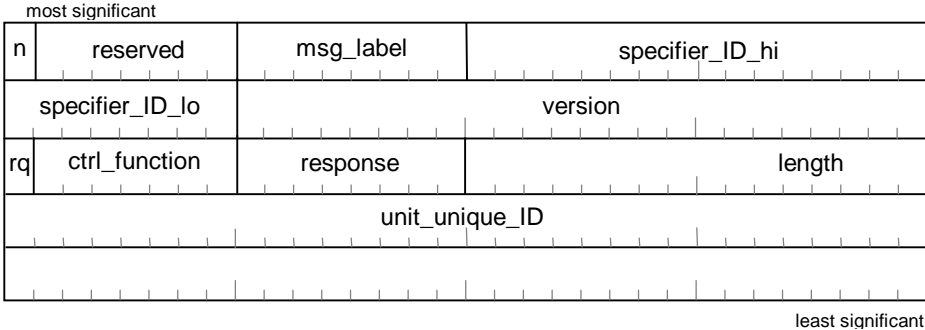
# 1 Login Request Proposal

## 1.1 Introduction

Peripherals have limited resources to accept Logins from multiple Initiators, some may only support one Login at a time. For this reason Initiators are encouraged to Logout when they are finished using a peripheral. Since a Target only device cannot originate communication without a Login, a Target requires a mechanism to request communication when a Login does not exist.

The defined mechanism for Login Request will use the Message\_Request / Message\_Response registers specified by IEEE P1212r. A field in the Feature directory shall indicate which Initiators support this mechanism.

The format of the Message\_Request / Message\_Response Data is illustrated by the figure below.



**Figure 1 – Message\_Request / Message\_Response Data**

The *notify* bit (abbreviated as n) bit shall be set to one to indicate that a Message\_Response is required. A response written to the Message\_Response register with notify set to one indicates that the Message\_Request is unrecognized.

The *msg\_label* field shall be used according to P1212r to correlate a Message\_Response to a Message\_Request. Similar to our rules for signature?

The *specifier\_ID\_hi* and the *specifier\_ID\_lo* field shall contain the Organizationally Unique Identifier (OUI) obtained from the IEEE Registration Authority Committee (RAC) by the PWG. This is the same value as the *Command\_Set\_Spec\_ID* in the configuration ROM.

The *version* shall use a unique sub-ID. Value TBD.

The *message\_detail* shall follow the format indicated above using a new *ctrl\_function* that indicates Login\_Request.

The length field could be included or we could use an implicit fixed length.

If a Message\_Response is not received the Target may wait for up to a *Reconnect\_Timeout* (10 seconds) time before retrying the Message\_Request exactly one time. If no response is received after that time the Target will conclude that the Message\_Request was unrecognized.

It is expected that initially this mechanism will be used with Initiators that have Logged into the Target at least once in the past. This simplifies and limits discovery to Initiators and Targets that have a history of successful communication.

This specification does not limit the use of the Login Request to discovery via history. It is valid for a Target to perform a Login Request to an Initiator that it has not previously communicated with.

**Do we need to mention discovery for this or is it out of scope?**

When a Target that does not have a current Login requires communication with an Initiator, the Target may write the Message\_Request data to the Initiators Message\_Request register with ctrl\_function Login\_Request. The Initiator shall respond with Message\_Response data written to the Targets Message\_Response register with ctrl\_function Login\_Request and a response value which indicates the status of the request. If the response indicates request completed OK then the Initiator will Login to the Target.

Do we need new response codes like OK | REJECTED | WAITING or do we reuse response codes already defined???