1 Login Request Proposal

1.1 Introduction

Peripherals have limited resources to accept Logins form 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.

The format of the Message_Request / Message_Response Data is illustrated by the figure below.

most significant

n	reserved	msg_label	specifier_ID_hi
specifier_ID_lo		version	
message_detail			

least significant

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* filed 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 *specfier_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* is the same as the *Command_Set* value in the configuration ROM.

The *message_detail* shall follow the control information format with a new *ctrl_function* that indicates Login_Request.

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.

Do we need a way to indicate which Initiators support this feature?

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.