The primary question is: why are patron and material identifiers (fields AA and AB) returned by the server in response to client messages which contain the same data? Is it for canonicalization or for confirmation?

For example: in a 63 request, the client knows the identifier of the patron, and it's included in the 63 request. It comes right back again in the 64 response. Similarly, in a 17 request, the client knows the identifier of the item, and it comes right back again in the 18 response.

Current situation:
(This is my interpretation of how things are working in practice; others may know things I don't)

For the patron identifier, AA, the server's AA response is considered to be a canonical version of the identifier which the client sent. This is useful in situations where the library has 14-digit Codabar barcodes, but allows patrons to log on using only the handful of non-zero post-prefix digits. For example: a patron logs into OverDrive using the “short” version of his barcode, and OverDrive sends that to the ILS in the AA field of a 63 message. The ILS's 64 response tells OverDrive what the canonical form of the patron's barcode is, so that no matter what the patron entered, he's always logging into the same, correct OverDrive account.

For the material identifier, AB, the server's AB response is considered to be an extra check. 3M self-checkout machines throw errors unless the server's AB response exactly matches what the client sent.

Proposals:

1. We should standardize what it means for a server's AA or AB response to not match the client's request.
2. The meaning of non-matching AA fields should be the same as the meaning of non-matching AB fields.
3. Server-sent AA and AB fields should be considered canonicalizations and not confirmations. We're already relying on layers far below SIP to ensure that the messages are being passed properly. There's nothing to be gained by this extra check, and there are great opportunities that canonicalization offers which we're passing up by using it that way.

See the OverDrive authentication scenario above for an AA example.

In an ILL situation, if a borrowing library wants to use the lending library's barcode as its identifier, then it's possible for two items to have the same barcode. Some ILSes support this. If AB is used for canonicalization, then SIP will work much better for such systems.