Whilst reviewing ARINC 665-4 Draft 2, Auvation has identified two issues relating to part format standards that the sub-committee may wish to consider.

1. Neither the ARINC 665-4 Draft nor ARINC 838 provide any real guidance on the circumstances under which these alternative part formats should be used. It is appreciated that, in practice, this is likely to be decided by if/when the air-framers decide to adopt ARINC 838. (Perhaps Boeing/Airbus have a view on when this will occur?). However, shouldn't the SDL sub-committee at least some guidance to industry in this respect? Presumably our position is that ARINC 838 is the preferred standard for software parts going forwards (for new aircraft programmes) but that ARINC 665 will still be used for legacy needs for many years to come? If this position is correct, shouldn't the two standards include a clear statement on this point?
2. It is clear that there is a vast amount of content (perhaps as much as a half of it) that is common to both standards. Examples include part numbering rules, file naming conventions and integrity checking mechanisms. One of the most fundamental principles of software engineering is 'one-fact one-place'. The main consequence of not following this principle is the high potential for inconsistencies. This is obviously currently afflicts ARINC 665 both internally and in its relationship with ARINC 838. Trying to avoid conflicts between the two standards when new approaches are adopted will be a maintenance nightmare. One potential solution to these problems could be a document which sets out terminology, rules, formats and techniques applicable to all (modern) part format standards which would capture most replicated content. ARINC 665 and ARINC 838 could then refer out to this document. This could also provide a home for a solution to point 1 above. Does the sub-committee have a view on such an approach?