

Re: Warning: The structure contains misaligned fields

Source: <http://coding.derkeiler.com/Archive/Fortran/comp.lang.fortran/2008-04/msg01231.html>

- *From:* Craig Powers <enigma@xxxxxxxxxx>
 - *Date:* Mon, 28 Apr 2008 15:39:21 -0400
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jamesgiles@xxxxxxx wrote:

On Apr 28, 11:35 am, Craig Powers <eni...@xxxxxxxxxx> wrote:

...

The significance of SEQUENCE is that identically-declared types will be treated as identical (i.e. if you were to repeat your declaration of type(ccc) in a subroutine, it would be identical to the type(ccc) declared in the module and one could be used as an actual argument corresponding to the other as a dummy argument). The name implies that the memory layout will be exactly as declared, but the standard does not actually impose such a requirement.

It doesn't usually say anything about memory layout as such. However, since SEQUENCE derived types may be used in COMMON and the components be storage associated through that COMMON with non-derived-type variables, it's hard to imagine how it would be implemented without actually being in the order declared.

Depending on what restrictions are imposed on COMMON, it might be feasible for the compiler to automatically re-order to avoid alignment issues, as long as that re-ordering were applied consistently across all contexts.

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