

## 29 STUBS AND DRIVERS

### Problem description

For the purpose of testing systems or parts of systems, often so-called stubs and drivers are built. A stub is a simulation program that replaces a program, including the associated input and output streams, and is called upon by the test object. A driver is a simulation program that replaces a program that provides the control or call to the test object.

Should the stubs and drivers, developed by a project team be considered in a function point analysis?

### Discussion

Development effort is involved to build stubs and drivers. They are not a part of the product at delivery and thus in any case do not belong to the product size, similar to conversion software for example. The question remains whether they, like for example conversion software, can be considered as a part of the project size.

Conversion software is, even if used only once, and adding no functionality to the system developed, delivered to the client as a project result.

Stubs and drivers are testing tools that are used during the project and potentially are transferred to application maintenance. Stubs and drivers are tools that must be localized entirely within the domain of system development as well as all other provisions that should be taken during the project to bring the project to a successful conclusion. They are no features that are recognized by the user and they are meaningless from the user's perspective.

### Solution

Stubs and drivers should neither be included in the product size, nor in the project size.<sup>1</sup>

### References to the standard

3.6.1, 3.6.2, 7.1, 8.1 and 9.1

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<sup>1</sup> This solution only applies under the assumed conditions in this example, where there is no explicit requirement by the end-user to deliver stubs and drivers to the production environment. If this had been the case, the stubs and drivers would become part of the product functional size.