Chapter IX

Function Point Metric Auditing

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All the processes carried out in most organizations are liable to be audited so that they allow more confidence in the organization itself and/or in its customers or users.

Software is not an exception; in fact, one has become used to seeing audits in information technology departments. However, it is more unusual that audits should be implemented concerning software size measurement in function points by using the most common measurement techniques, such as the IFPUG (International Function Point User Group) ones.

This association was formed in 1986 aimed at spreading and adapting the Function Point Measurement Method, which was invented by Allan Albrecht in 1979 (Albrecht, 1979) and published in 1984 in his well-known paper “Productivity Measurement and Estimate Validation”.

Such software size measurement is being employed more and more in the software used as a counting element for other metrics like productivity (PF/Pers. Month), quality (defects / PF), cost (Euro /PF), etc. It is also essential to measure a number of variables when implementing an SPI (Software Process Improvement) in order to learn the current starting situation, and what situation one is in after the implementation of such a process.
BRIEF PRESENTATION OF THE FUNCTION POINT MEASUREMENT METHOD ACCORDING TO THE IFPUG

In order to carry out an audit, it is necessary for the auditor to know the method that he/she intends to audit. Thus, in spite of not being the purpose of this paper, the main features of this technique will be shown, recommending studying such a method through the manual published by the IFPUG (Function Point Counting Practices Manual Release 4.1 January 1999), since this is the most currently employed metric.

This method means to assess the software size by estimating the functionalities that such software supplies the user with, that is, it measures the size from the users’ point of view, so that the user is able to understand and validate it.

Moreover, whether a given method is used or not, has no influence; and neither has whether a given tool, a language or a programming style in particular is used.

The measurement unit is the Function Point, which has no meaning itself corresponding with anything real, but it is a conventionally empirical measure like the meter or the grade centigrade.

Admittedly, it is far more suitable than the code line might be, whose value as metrics is meaningless considering visual programming techniques, object orientation ones, etc.

Function Point Measurement is based on the following functions identified in the software:

- Data type functions
  - Internal Logical Files (ILF)
  - External Logical Files (ELF)
- Transaction type functions
  - External Inputs (EI)
  - External Outputs (EO)
  - External Queries (EQ)

Before starting to carry out the measurement, it is necessary to identify the limits of what is to be measured.

Figure 1 shows an example of the human resources application,
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