A Case of Utilizing Results

Making of Software Function Confirmation Guidelines Concerning the As-built Measurement using TS with 3D-design-data

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1.   Introduction

National Institute for Land and Infrastructure Management (NILIM) is studying "the As-built measurement using TS with 3D-design-data" (below this, TS-assisted as-built measurement) that is one of the construction technology of information. TS-assisted as-built measurement installs exclusive software in TS (total station) and reads the designing data of three dimensions. Thus, not only can the constructors get the efficiency of as-built measurements, but it also allowed the purchasers to get the efficiency of supervising, inspecting and can confirm the credibility. To get the efficiency, in the antecedent of the function using ICT (information and communications technology), we introduce operation rules different from the conventional methods. Therefore, it is important to secure the credibility in the function of the software we use.

2.   The Purpose of the Function Confirmation Guidelines

When TS-assisted as-built measurement is conducted, we must install the function shown in "the specification paper for function requirement" that NILIM decided. In "the specification paper for function requirement", as well as the function for efficiency, we oblige to install the functions that aim at the rise of credibility, such as limitations of measure distance, and prevention of measurement data manipulation. Based on this function, the operation rules aim to reduce the investigation frequency and data presentations comparing with the way that they measure with the level and tape and record the figures on the field notebook. Therefore, it is important to secure the credibility of this function in the software we use. However, according to the yearly increase of introduction cases into the constructions under the direct control of the Ministry of Land, Infrastructure and Transport (MLIT), the developing of the software by new entry dealers is on the way. In this situation, there is a possibility that the software developers could misunderstand the language of the specification paper for function requirement. So we made the function confirmation guidelines as a means to confirm if the software installs the right functions.

3.   The Outline of the Function Confirmation Guidelines

These guidelines decide the concrete way of confirming on each function of software shown in the specification paper for function requirement. As the main method, they read in the attached sample data, and confirm the software movement and calculation result to accord with right result shown by the guideline.
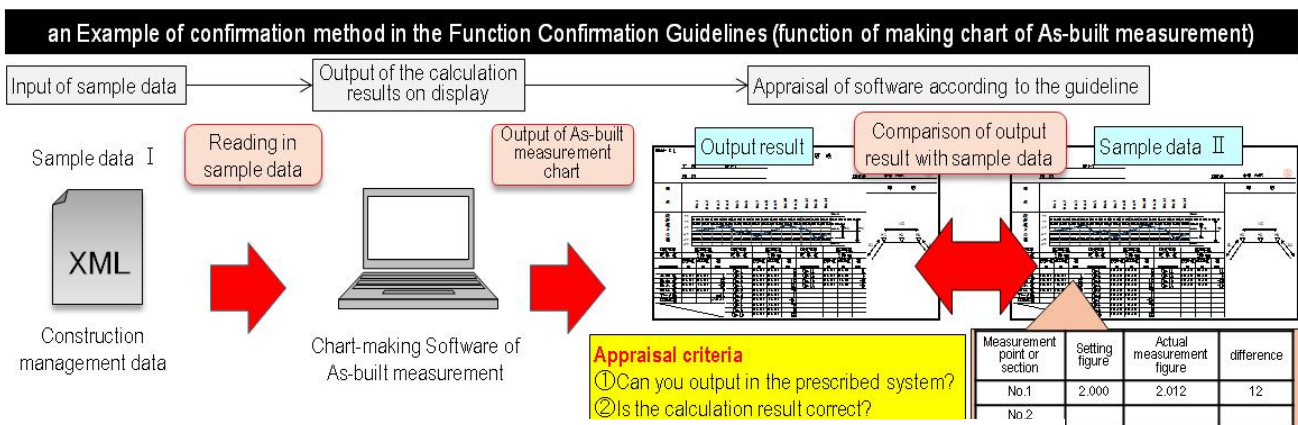
(Reference HP) http://www.nilim.go.jp/lab/qbg/ts/

Figure : an Example of Function Confirmation using Sample Data