

Use of FCI (Function Coded Image) in the tsunami database

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Abstract. It is important to recount severe experiences of tsunami disasters to future generations. A tsunami database is useful for this purpose and is being built in many countries. In addition to documents, pictures and maps are sources of rich information. If the conventional method is applied to copy and store them in terms of electronic record, the pictures are recorded as an ensemble of fine dots. When a picture thus stored is reproduced with a desirable enlargement, an originally smooth line often becomes a succession of enlarged rectangles. This deterioration is unavoidable. FCI (Function Coded Image) is introduced by one of the authors to improve this situation. A line in the original pictures or maps is reproduced as a line in any scale of enlargement. Accuracy of reproduction is always kept and is satisfactory for storing maps of tsunami traces. Examples are shown for the 1983 Nihonkai Chubu earthquake tsunami and the 1993 Hokkaido Nansei-oki tsunami. Another advantage is that a picture in FCI is more easily transferred by electronic means than that in the conventional method.

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