

Constructing a Survey Accurate Digital Cadastre

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ABSTRACT

Land Information New Zealand has contracted EDS to convert historic survey data for the construction a Survey-accurate Digital Cadastre. The areas selected contain 1.35 million parcels, or approximately 70% of the live parcels that constitute the New Zealand survey system.

This work has been undertaken in three parts: the definition of a new datum to which the converted survey will be adjusted; the creation of a sufficient density of control in the conversion areas to gain a high degree of co-ordinate accuracy; and the capture and adjustment of boundary and traverse data from current survey plans tied to the new control. The intent of the exercise is to create a network of a measured co-ordinate accuracy standard that can be used by external surveyors and for electronic plan lodgement.

EDS has developed specialist techniques and tools for the accurate capture and adjustment of the network. Capture of parcel boundaries and traverse is performed for all plans supporting current parcels, with least-squares adjustment performed in terms of the new datum. In order to achieve the required timeframes, the system developed is an automated multi-step production workflow process that is scalable to support a large workforce. All software tools have been developed to perform single specialists functions to support this model. Considerable performance benefits have been realised through this approach.

Management of both the workflow process and the quality processes are vital to the success of the operation. EDS has ensured that quality feedback and iterative quality improvement is an integral part of the process. The “productionisation” of the conversion process has allowed the centre to grow to over 100 staff, producing 8,000 thousand converted parcels per week.

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