



THE SVG NATIONAL REVALUATION PROJECT

CHRIS EWING AND CHARLES WHITAKER
LOOK AT A RECENT PROJECT BY PROPERTY
AND BUSINESS CONSULTANTS BROWN &
CO LLP AND HALCROW GROUP LIMITED TO
SUPPORT THE GOVERNMENT OF ST
VINCENT AND THE GRENADINES (SVG).

The Government of St. Vincent and the Grenadines (SVG) needed to undertake a total revaluation survey of all 35,000 properties within the inhabited islands that make up this diverse and beautiful Caribbean nation. It was vital that the improvements to its land tax valuation system were undertaken within a very short timescale, to bring about greater efficiency and fairness in its existing land tax system. The challenges faced by Brown & Co and Halcrow were to develop field mapping and data management tools to support this work, and train local survey teams from scratch to perform more than 20 revaluation surveys per team per day.

Introduction

The Government of St Vincent and the Grenadines (SVG) want complete coverage and accurate valuations of all properties (residential and commercial) on the islands in order to implement a more equitable property tax system. Brown and Co LLP (who have worked in the Caribbean since 1998) undertook a pilot study in 2003 and identified that over 30% of properties were missing from the existing tax roll. There is also a desire across the OECS (Organisation of Eastern Caribbean States) region to move from annual rental value to market value as a basis of property tax assessment. Brown & Co have subcontracted Halcrow Group Limited to assist with GIS inputs to undertake the National Revaluation project. This article outlines how the work has been undertaken. GIS has been used extensively to aid data capture and enable a more efficient workflow.

Background

There are over approximately 35,000 properties on the islands of SVG. For the National Revaluation project each of these were located,



surveyed and re-valued over an 18 month period (the last national revaluation was undertaken in 1990). Brown and Co have been contracted by the Government to design, implement and undertake the re-valuation and Halcrow have been contracted to provide GIS and data management support. The project follows on from 2 other property valuation related projects conducted by Brown and Co with Halcrow in St Lucia in 2004 and St Vincent for the new airport in 2006.

Initial Stages

Existing data sets (recent property sales data, electricity and water supply records) were collected from the relevant organisations, together with background aerial photography imagery to identify properties – there are no street names and addresses in the majority of SVG and no specific location addresses for any of the existing property tax records. Existing maps are paper based and date back to 1982 and therefore omit all built development carried out over the last 25 years. Therefore the new revaluation data set was effectively required to be populated from scratch. To notify residents and property owners there has been national coverage in the media (TV and press) including a national address from the Prime Minister. The field work routine established requires two property visits. Firstly a hard copy notice is dropped at each property 2-3 weeks before the inspection and field valuation takes place. Both stages are recorded in the field in a GIS format.

Field teams (9 teams of 2 persons) were selected from technical college graduates (building or related subjects) and each field team member joined a 2-week intensive course (run by Brown & Co) on property value estimation and use of the mobile GIS tools (run by Halcrow). Comparable sales evidence was gathered from recent sales and those properties used to benchmark the value for the revaluation. Due to the relatively low volume of sales evidence and the nature and requirements of a mass valuation sales evidence has been broken down to values for various different types, condition and location of built property (EC dollars per square feet) and values for land parcels (EC dollars per square feet). Those comparable values are then used to guide the field teams to make an initial assessment of value, which is

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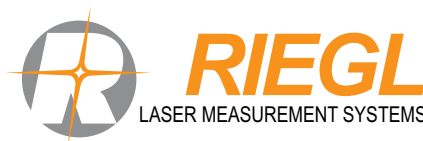


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subsequently inspected and approved (or amended) by one of the project valuers.

GIS data preparation included reprocessing base data and aerial imagery (flown in 2007 by Blom Simmons) to convert for use on the mobile GIS; set-up of field data collection forms for the field teams (ArcPad); and customisation of the ArcPad interface to allow faster data collection and less reprocessing time back in the office (ArcGIS). The methodology was similar to that used on previous projects in St Lucia and St Vincent. The Magellan was selected to enable digital images to be taken embedded to the spatial data set at each point of data capture.

Field work

Field work will take approximately 18 months over the 35,000 properties over the mainland and the 5 main populated Grenadines islands to be identified and valued. Each team is equipped with a Magellan Mobile Mapper 6 with a customised ArcPad application designed by Halcrow and Brown & Co. To train the teams Halcrow conducted a series of training sessions in use of the handheld GPS within the office and out in the field.

Customised data collection forms in ArcPad speed up data collection for the field teams. Each field team inspects approximately 20 properties per day and records the position of the property including the capture of information across some 60 data fields, e.g. on square footage, number of bedrooms, name of owner, digital photographs (linked as an attribute to the data set), utilities, building material, condition, size of land parcel, etc. The field team assign a provisional field assess-

ment of value based on these attributes and mainly condition, location, nature of the property, square footage of property and land, and other features that impact on value. To maintain a record of the property and assist the office based valuation approval process, up to 10 photographs may be taken of each property. This is used to digitally "re-visit" the property back in the office using a valuation sign off procedure developed as a "Valuers Form" within an MS Access front end which links to the ESRI Personal Geodatabase storing the data.

The geo-referenced photos collected in the field, together with the attribute data collected on each property, and the ability to look at the location of the property within the aerial imagery within ArcGIS, provide the valuation team with the required information on which to approve or amend the field valuation assessment. Each property location is assigned a unique ID at the point of data capture.

Office support

Brown and Co employ 2 staff permanently in the Inland Revenue offices in Kingstown, St Vincent and a UK based staff member is assigned to manage the project. Mapping data (aerial imagery, roads and buildings) are uploaded to the field units by the office staff. GIS data collected in the field is then downloaded to the file server and stored in an ESRI Personal Geodatabase at the end of each day. The office team are involved in the production of overview maps using ESRI ArcGIS to communicate progress on the project. MS Access is used as a reporting tool to allow valuers to view properties digitally

and sign off when a property value is approved. Recently, Halcrow have also provided a web GIS for Brown & Co and the St Vincent and Grenadines Inland Revenue to enable monitoring of field team progress.

Conclusions

The use of GIS and GPS technology on this project has allowed better coordination of data collection and more efficient use of resources. GIS has prevented duplicate data collection by facilitating management of the field work process and illustrating to the field team and office staff where properties are and which areas have been covered. Data can be collected more efficiently using the hand held GPS to capture the property's location – previously an impossible task in St Vincent with only hard copy maps some 25 years out date and no national addressing system. The digital workflow means data is collected correctly first time round and also prevents the need for costly digitisation of records back in the office.

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