CONFERENCE COVERAGE: A SYMPOSIUM ON LAND REGISTRATION AND DATA BANKS

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For centuries, the description of boundaries in real estate deeds has been by reference to landmarks or neighbouring property. These "fixed" points, such as roads, buildings, and the less permanent geographical features, such as marshes and river banks change over the years so that it is often difficult to identify the parcel of land from the description. Details have often been orientated against magnetic North but nevertheless this kind of measurement is crude by modern standards and becomes increasingly complex as lots are divided and subdivided in areas of dense population and high land value. Registrars copied these deeds into their registers, thereby perpetuating errors so that lawyers today, when they certify title to land, are very wary how they vouch for the accuracy of descriptions based on this source. The Torrens system which is in use in Western Canada and parts of the States is certainly an improvement on the old deed registration method, but there are still limitations. What is needed is far greater accuracy in the identification of parcels and in addition, an opportunity of linking this information with a whole range of other socio-economic information by means of a data bank of information stored in the computer.

Professor Konecny summarized the possibilities and problems when he said:

"It has been suggested, than an integrated environmental data bank be based on land areas. Due to the fact that real estate along with stocks, bonds, and commodities is of major economic significance, there is a special reason to combine the legal aspects of land transactions concerned with land titles and mineral rights with those aspects of statistical nature of value to the community, without which proper resource planning, just taxation and management of public affairs is not possible.

"The requirements for the establishment of a data bank based on land parcels are so obvious, that one wonders why one has not generally proceeded along these lines so far.

"The difficulties in the implementation principally lie in:

a) the geometrical definition of land boundaries requiring a control survey and to a lesser extent in

b) the establishment of a land parcel index requiring a map, based on a control survey.

c) The establishment of the data file, since the introduction of modern computer technology presents the least serious problems once the pertinent data are collected. The development of intricate computer software is a problem which can be solved in months, while the proper difinition of land boundaries and its mapping is a task for years. Nevertheless it is of essence to look far enough ahead to avoid time and energy-consuming blunders which could have been avoided by laying emphasis on a proper foundation.

"The main obstacle in establishing a proper foundation is based on the fact that coordinates defining the location of points must be derived from ground surveys involving the physical measurement of directions and distances. The establishment of a data system on land parcels is an easy task once the geometrical relations are established."

Many subsequent speakers enlarged on the technical problems involved, and whatever the outcome of their research, the results will be of the first importance to archivists since a data bank along the lines indicated will contain a vast store of historical material in years to come.

Mr. David Moyer reported that the United States Department of Agriculture was investigating the feasibility of automating land data for several purposes, including information on ownership and control of all farm land and a record of how agricultural income is distributed among the population. A second use for a data bank would be to develop a more efficient system of transferring ownership of land. In 1966, such a transfer of a $28,000 farm from one person to another cost about $2,000 including all charges. This figure would be considerably reduced by an automated registry.

Mr. Moyer then described briefly the operation of three automated systems which he had investigated. The first, in Nassau County, New York, where 10.5 million land title records from 11,000 books are stored on microfiche and retrieved on Mosler Selectrievers at the rate of 400 requests a day saves $68,000 in space annually, and reduces the number of staff required to service the registry. At present, no other data is combined with this registry material.

The Washington, D.C. Real Property Data Bank resulted from a

request for a city-wide survey of housing conditions. All information from tax assessment records was tranferred to IBM cards and converted to tape. Conversion of the file to random access equipment is planned for early 1969. Mr. Moyer stressed that "It is important to note that all data in the Washington Data Bank thus far pertained to land parcels. The data have all been obtained from public records. The addition of 'people data', tied to the land parcel, would likely raise the question of invasion of privacy that is a common objection to many data banks."

The Urban Management Data System designed for Alexandria, Virginia, is the most advanced of the three systems since there are 60 data items for each of the city's 20,000 land parcels. "Nearly eighty percent of these 60 items are from data files of the assessment, planning, or school department, with most of the remainder being supplied by the fire, finance, and public works departments. Items include identification, such as owners name and legal address; location, such as census and planning district; physical characteristics, such as area; economic characteristics, such as assessed value; and use and improvement data, such as zoning, utilities, and fire hydrants.

"In addition to the 60 items in the parcel file, a subrecord file is available that contains data on each building on each parcel. The 23 items in the subrecord include: location of building on the parcel, number of floors, type of construction, year built, and condition."

Dr. C. W. Raymond of the Resources Research Centre, Department of Energy, Mines and Resources, Charlottetown Office, spoke for a while about the Canada Land Inventory and described how it required information on (1) land capability in agriculture, forestry, recreation, fish, and wildlife, and (2) present land use. On the other hand, owners of land have their own ideas on how they wish to act based upon their own particular background. This is socio-economic information and should, if possible, be also fed into the CLI data bank.

At present the only definitive property maps in the area are the original land grants. A survey was therefore taken conjointly with air photographs and personal interviews along the north shore of Nova Scotia and Prince Edward Island to ascertain the kind of socio-economic information needed for an accurate assessment and prediction of land use. The agricultural census of farms in the National Census contains those with only an income of $300 and over from the land, which although small, does not cover a great many who simply reside on the land and earn their living elsewhere. For those who are content to live off the land, their units must

be increased in size and offers of extra land must be made attractive for this resource-based economy. For example, on Lot 59, Prince Edward Island, 200 individual families hold less than 100 acres each. Twenty-four farms gross $3,750 a year and above, but twenty of these are concentrated in two areas. Those in other areas must be persuaded to sell land as an attractive proposition to encourage consolidation. There is also a big "land scatter" problem within estates and all this is just as important as transfers of land ownership. If this kind of information can be fed into the CLI data bank, it will be possible to select accurate samples and run accurate sample surveys.

Professor Karol Krotki of the Department of Sociology in the University of Alberta described his experiences with the Census of Canada. The enumeration areas of the Census changed between 1961 and 1966 but still remained merely a convenient workload for an enumerator, with no socio-economic significance. Each area contained about 150 households or about 500 people to form the basic unit of the census. Details are on 46 reels of tape.

For the 1971 census, there has been developed the concept of the user-designated area which is not tied to enumeration areas. Data will be coded to the level of the block face, four to one block, in urban areas. In rural areas, the unit of the block will still be used. The coding of places of work is not yet below the municipality level because the accurate description of the place of work is not generally known by the worker. A request for information on a user-designated area would be about $100 a shot.

There is a problem in connection with the Statistics Act in that no statistics about individuals can be given by the Dominion Bureau of Statistics, even when the name is scrambled, and there is therefore a conflict of interest between the above and a social scientist's data bank requirements. Social economy is concerned with aggregates which move people by policy as opposed to the police state concept of personal statistics used to coerce individuals. Only aggregates overcome the inaccuracies of individual statements at the block face level, and it is indeed surprising that half the Canadians interviewed for the census described their occupations incorrectly.

Much progress has been made in Canada in record linkage and matching, and in British Columbia there has been an interesting project matching birth and marriage registers.

Quite apart from inaccuracies in land titles, the present system of title searching is not only out of date but extremely costly, and Mr. A. C. Hamilton, President of the Canadian Institute

of Surveyors, gave some startling figures which were challenged but are sufficiently correct to make a good point. He estimates that in New Brunswick there are 1.6222 million deeds registered and that about 16,500 title searches are made annually at an estimated three man hours per search which mounts up to the alarming total of 30 man years. He also gave examples where an ambiguous description of boundaries to a property resulted in much litigation and local bitterness on several occasions. Mr. Horace Hanson, Q.C., speaking as a member of the legal profession in New Brunswick, said that the opinion of the New Brunswick Bar was divided on the merits and demerits of the present system of deed registration, but there is general agreement that the result is defective. Lawyers require (1) a clear identification of the land, (2) who owns it, (3) the qualifications with regard to title; i.e. what kind of legal title is involved. Mr. Hanson reminded his audience that already the State of Nevada allows print-outs from data banks as prima facie evidence and that a hard look should be taken at this kind of storage and registry of title. For any new legislation, expert drafting would be essential but it is high time that the land law of the province was simplified.

Perhaps these few examples will give some idea of the scope of the symposium and the immense mass of automated historical information that can and eventually will be linked to land parcels indexed and identified accurately. Archivists will do well to watch closely developments in this field and especially, procedures adopted for up-dating information in the data banks which may erase much historically valuable information no longer of value for administrative purposes, unless the necessary safeguards are taken in the same manner as historical records are protected in records management programmes. All the papers delivered in this symposium will appear in the March and June, 1969, issues of the Canadian Surveyor, the journal of the Canadian Institute of Surveying, 157 McLeod Street, Ottawa 4.

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