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PAPER BY THE CONVENOR OF THE WORKING GROUP ON
TOPONYMIC DATA FILES

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It is only very recently that the public has begun to be aware of a revolution which has been taking place over the past three years. In fact, the first murmurings of this revolution were audible in the 1960's and their first expression dates from some eighteen years ago. In the last three years the revolution has rapidly been gathering pace and spreading far and wide in the so-called western world. The revolution is the adoption of Geographical Information Systems (GIS).

Acceleration in developing GIS has been due to the advances in computers, in computer-assisted cartography, data base management, the potential of the present-day graphics processor and the insistent demands for geographic data by planning and development authorities, public utilities and similar bodies.

From the beginning, the requirement for databases of the GIS kind were conceived as a valuable tool for land registration and taxation (reminiscent of the needs of a cadastre in Roman times) and certain topics like the management of forestry. Then, GIS became the preserve of geographers in academic institutions. Now, it has established itself as something of great value to central government.

At the heart of a GIS is the so-called "spatially-referenced geographic database". In other words, a map in digital form. The source of such a database is the appropriate national topographic map coverage and the toponymy contained in it. Unfortunately, many government and private agencies around the world have found it impossible to wait for such mapping to be completed or up-dated and so they have proceeded to build their own database or their own GIS. In the course of such action little regard has been given to possible shortcomings of the toponymy.

To give some idea of the growth of GIS there are said to be over one thousand in North America.

Urban and regional (province) databases have been created in great number in recent years. They meet a great many needs: infrastructure, public utilities, housing, population, employment, commerce, industry, parks and leisure, forestry, health, education, planning, environment and so on.

Toponymy is one of the vulnerable elements in the process of building a GIS. The pressures to achieve a national or local GIS may preclude any attempt to achieve a standard national toponymy. Indeed, in one country attempts to "improve" the toponymy resulted in the abolition of the national Geographical Names Committee and a decision to revert to the existing non-standard toponymy. Who can say this will be the last action of the kind?

It is certainly not the first. There have been several instances in the past where the urgent need for maps for administration, development or defence has led to the abandonment of attempts at a standard toponymy. This is in spite of the acknowledged value of such a uniform toponymy.

The concept of a GIS is the creation of wealth or its expansion by more effective assessment and management of national resources. It would be hard to find a better example of the gulf which divides the high technology world from the rest.

In the world of high technology it is now recognised that there is a world shortage of people with the skills required for the creation of a GIS. In the world of low technology the only possibility of acquiring such a means of measuring and monitoring national resources, human or other, is by way of foreign or international aid. But even if the money, people and equipment could be provided the basic infrastructure would first have to be created. How can a GIS be contemplated in a country where uninterrupted power supply is no more than a dream of life in the remote future?

How can a country struggling to provide its people with the basic necessities of life, like food and water, and with, perhaps, two hundred or more languages take seriously a UN Resolution calling for account to be taken of "aboriginal" names? Given all the money in the world, where would the linguistic expertise be found? It does not exist as far as field collection is concerned, to say nothing of finding a means of writing the names, office processing and standardization.

The only road to a complete but, perhaps, less than perfect toponymy would appear to be by way of some form of economic aid devoted to basic topographical mapping. That same mapping would be the basis of a GIS produced also by means of "aid", but a computer-based GIS requires efficient power supply and the skilled manpower to operate it successfully. It is evident, therefore, that overall development, which implies massive aid, is required before such sophisticated management tools are provided.

In the absence of such massive aid, the gap between high technology nations and low technology nations will continue to widen.