



JoGIS NEWS

CORPORATE GIS

"Keeping you spatially updated!"

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From the Manager's Office

The first initiatives in terms of establishing an accurate, comprehensive and stable GIS for the City of Johannesburg started almost 20 years ago at a time when computers were only for "geeks" with pony tails and had no place in a real working environment. Since those humble beginnings the development of GIS fought its way along a very rocky path in terms of gaining acceptance, surviving and growing in spite of severe financial and human resource shortages and numerous re-organisations.

The establishment of the new City of Johannesburg in 2001 finally provided the opportunity to establish a fully-fledged and properly resourced GIS Department. Even with this opportunity it has still been an enormous struggle to consolidate all the "bits and pieces" into one integrated and efficient system.

The Department has been very fortunate to be able to draw together, retain and develop a well-qualified and experienced team, dedicated to GIS.

It is with huge pride that I can stand back and see a solid foundation of resources and base information which can finally support the development of numerous spatial information and decision-making systems.

The advent of Internet Map Serving software in the GIS environment has finally put GIS functionality on virtually every desktop which is evident on the

CGIS Intranet system which is already processing an average of 5000 hits per day.

Bright ideas or constructive criticism are always welcome and you can forward them directly to me at JohnF@joburg.org.za.



John Floyd
Head: Corporate GIS

Customer Survey

A customer survey for CGIS was conducted in November 2002 to measure the current services and to establish possible new directions in services and information requirements. The survey was received positively, as is reflected in the 55% response that was received. Special measures were taken to ensure representation from the various customer groups like internal departments, the regions, UACs as well as external clients. Thank you to all who participated!

It is clear that each group has its own focus. Internal departments frequently utilize map-making services, regions use counter info often while the UACs frequently use the aerial photography. The internal departments seem to generally have a clear understanding of the services, while the regions need to be informed about the scanned images, digital data and aerial photographs. Not all the external clients utilize and/or are aware of the aerial photography either. This provides a clear indication for awareness campaigns.

According to the importance rating of information, the priority datasets are cadastre, zoning, roads, land use, street addresses, admin boundaries, proposed townships, proposed roads, aerial photographs and ownership data. Almost all the top priorities have either been addressed or are in the process of being addressed (e.g. zoning, street addresses, proposed townships). Ownership data will be addressed by linking between the GIS and a copy of the Deeds Office data loaded on the proposed Electronic Customer Database. The land use data remains a concern and proposed roads data needs to be sourced.

New cadastral dataset

An updated set of cadastre will be available from mid July. It will incorporate the approximately 500 townships that have been recently captured, SG approved or Deeds office proclaimed in the past year and will be supplied in the 26-digit code format. A comprehensive maintenance phase will also start

in the next month to capture all the subdivisions and consolidations that have been registered in the previous years.

Geodatabase established

Since 1995 Corporate GIS' data has been captured and maintained within a Unix environment using ArcInfo, ArcStorm and customised Arc Macro Language (Aml) routines. However, GIS technology is moving towards the GeoDatabase as a more efficient and intelligent way of storing GIS data. For this reason Corporate GIS has established a GeoDatabase using SQL server and ArcSDE and most of the GIS layers, except for the cadastral layers, have been loaded. Comprehensive Metadata for each data set has been captured and will be made available on a Metadata server in the near future. In the past year, Zoning, Street Addressing and Proposed Township Systems have also been developed to capture, store and maintain data in the Geodatabase environment.

The final stage of the SDE project is the migration of the cadastral capture routines and cadastral data (not yet loaded in SDE) to the Geodatabase and Windows environment. A proposal call for the migration was advertised in May and it is expected that the final migration to the Geodatabase will be completed by the end of 2003.

Zoning Information

Development of the application for the capture of the zoning information has taken longer than expected. Substantial progress was made with the scanning of the amendment scheme documents that will be linked to the properties in addition to the primary zoning data such as use zone, density zone, height zones and building lines. The capture process of the primary zoning will start and continue through the 2003/2004 financial year.

As an interim measure the existing hard copy A and B series Scheme maps were scanned and made available on CD with free Alchemy software for view and print facilities. The CD proved to be popular within Council as well as with consultants, selling 71 copies from September to date. For more information see the Johannesburg website at www.joburg.org.za or contact rethav@joburg.org.za.

Street Addresses

Street addresses will be available by the end of June 2003. The addresses will cover the old Randburg, Roodepoort, Sandton and Johannesburg areas. Data is still outstanding for Midrand and other areas such as Ennerdale, Orange Farm and Soweto where a combination of street numbers, stand numbers and house numbers are currently in use. These areas will systematically be captured with the implementation of official addresses and the allocation of street names in conjunction with public participation and

information processes undertaken by the various regions. For more information contact pieterd@joburg.org.za.

Proposed Township System

Corporate GIS's clients, especially the UACs, will be pleased to hear that a separate layer has been created on the GIS on which the layout plans of townships are being captured as soon as proposals for new townships are submitted. This layer is different from the cadastre layers that consist of the exact co-ordinates as captured from Surveyor-general approved diagrams/plans. Because layout plans may change during the approval phase, the layout plans are scanned and these images are then placed in the correct position (registered to the cadastre) so that a user can see "what is in the pipeline" in a specific area. This addresses the need for more current spatial information to assist users in their planning processes. The development of the Proposed Township System is due for completion at the end of June 2003. For more information contact marcelleh@joburg.org.za.

New Aerial photography

A tender has been awarded to AOC to supply a new set of Digital orthophotos and 5m contours for the City of Johannesburg. Significant land use changes, developments and new informal settlements have taken place since the Joburg2000 dataset and there was therefore a need to obtain an updated orthophoto database to reflect these changes. The new photography will be flown at a scale of 1:12 500 and have a spatial resolution of 0.25m. Corporate GIS has retained the copyright and digital data and hardcopy prints will be available from January 2004. For more information contact chrisw@joburg.org.za.

Internet IMS site

Corporate GIS has established a number of websites for Council employees to view the Council's GIS and cadastral information on the Jozinet Intranet. There is however a demand for public access to the Council's data through the Internet and for this reason, an Internet Mapping Site (IMS) is currently being set up and tested. It will offer two levels of access: the first being a free access facility, providing basic information available to everyone; the second, a subscription service, with more detailed information and functionality available at a cost to the user. The free access will become available in the next month and notification of the IMS URL will be sent out shortly. The subscription access will have a credit card payment facility to allow payments for the service to be made online and will only become available towards the end of the year.