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Corporate Geo - Informatics

May 2013

Progress Report

Communique to all



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Contact Corporate GIS

We value your comments and suggestions.

Please e-mail comments and suggestions to cgis@joburg.org.za

The Melancholy of Autumn

The chill of winter is on the horizon. The sun is slow to rise and the arrival of night becomes noticeably earlier. Skies turn grey, and many people turn inward, both physically and mentally. At Corporate Geo-Informatics (CGIS) too, the journey of introspection has started once again to ensure continuous improvement of services to our customers.

We have visited 10 internal City departments and 6 Municipal Entities to listen to and identify user requirements, to stay informed of current and proposed GIS projects and to evaluate our services. The observation is that GIS is not seen as a "nice to have" anymore but as a requirement for daily operations. GIS and spatial information are now demanded as an essential service to support decision-making and thus the implementation of the City priorities. We are extremely fortunate that the City has reached this stage of maturity in the spatial information lifecycle.

Through the above exercise it has become evident that many projects in the City actually generate spatial information which, sadly, is not always delivered or returned to the City in a GIS format. Many products are returned to unwary clients or departments in document format with maps as mere images (.pdf). The challenge starts when this information needs to be used in combination with other GIS layers. By this time the service provider has left the scene and we struggle to obtain the data. As CGIS we have a definite monitoring and coordinating role to play in changing this behaviour and improving the process.

We have also come across several datasets that are maintained in the City, but with no real spatial reference. During the previous financial year CGIS assisted Community Development to spatially enable their datasets. This opened a whole new dimension to using the data, being able to answer basic questions of "what is where and why?" through spatial analysis. It is our intention to extend this partnership to other departments too. Through our customer survey in May 2013 we will gain further insight into our customer opinion. Your participation will ensure your voice to be heard and that you are part of shaping our service(s) to you.

Forthcoming events include another GIS laboratory experience for schools

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in September and the GIS day on international GIS Day in November. We will keep you posted on the details.

In this issue you will be able to read more about our Aerial Imagery products now available internally as well as externally through our websites, about the improved Deeds data processing, data quality projects, the GIS Champion award, change management roll-out, disability awareness

and much more.

Thank you for your continuous support. Keep warm and enjoy this edition of JoGIS News!

Marcelle Hattingh

Director: Corporate Geo-Informatics

Progress Report for October 2012 - March 2013

Spatial Information section:

The Spatial Information Section captured and corrected a total of 62 397 properties. These include 1770 new SG Approved subdivisions and consolidations properties as well as 2609 sectional scheme units.

There were 4146 new properties within Surveyor General approved townships, 535 new properties registered in Deeds Office and 13 929 status changes. A total of 181 CGIS Centre Lines were captured or corrected and 154 JRA Road Links.

The section is currently attending to a clean-up process on the Remainder of Agricultural Holdings project as well as a project on all invalid legal areas.

Public Information section:

A number of 7402 clients were attend to at the public information section between October 2012 and March 2013 with 94.96% attended within 20 minutes.

Fax service section:

There are 410 subscribed clients with 2936 requests attended to from October 2012 - March 2013 within 2 working days.

License applications:

A total of 594 zoning requests for license applications were attended between October 2012 and March 2013 of which 133 were for health licenses, 153 were for Liquor licenses and 308 were for trade license. This information is sent to land use management for the license approval process.

Projects section:

A total of 144 requests were attended between October 2012 - March 2013 of which 45 were internal requests and 99 external requests.

Website training:

A total of 122 clients were trained on how to best utilize the online maps website from July 2012 - March 2013.

Free training is offered. Booking is essential. To book contact Lesley Adams at 011 407-6203 or email Lesleya@joburg.org.za

Online Maps website:

Between October 2012 and March 2013 the internal website on "City Maps" via Jozinet received a total number of 1 412 760 hits with an average of 235 460 hits per month. The external website via eservices (<http://eservice.joburg.org.za>) experienced a total of 849 700 hits with an average of 141 616 hits per month. There are 9 active subscription users and 2 043 inactive users for the external website with a total of 2 052 external users.

There are only 9 active users because the website became free from 1st January 2013.

Top 5 external themes accessed

- Property (Free website)
- Property (Subscription website)
- Zoning (Subscription website)
- Transportation(Subscription website)
- Innercity (Free website)

Top 5 internal themes accessed

- Property (Subscription website)
- Property (Free website)
- Zoning (Subscription website)
- Planning Viewer (TAS)
- Transportation (Subscription website)

Top 5 external users

- City of Johannesburg
- Witwatersrand University
- Frances Kathy Reid
- Romel Bechoo
- Stephen Colley Jaspan

Top 5 internal users

- Corporate Geo-Informatics
- Planning
- Valuations
- Johannesburg Property Company
- Billing

Customer Satisfaction Survey results - December 2012

Corporate Geo-Informatics (CGIS) conducts a bi annual customer survey and are committed to monitoring the quality of the services and products provided, as part of an ongoing improvement process.

During December 2012, 26 questionnaires were returned and ranged from internal departments and external clients who utilized our services and products during the financial year.

A summary of the results are reflected below:

- 1 - Poor (0% - 29%)
- 2 - Below average (30% - 49%)
- 3 - Satisfactory (50% - 69%)

- 4 - Good (70% - 89%)
- 5 - Excellent (90% - 100%)

- Overall customer service - 87%
- Overall availability and accessibility - 80%
- Overall response time - 91%
- Overall quality - 92%
- Overall staff suitable and adequately trained - 100%

Our next survey will be distributed during May/June 2013. We welcome your feedback and appreciate your honesty. With your help, we hope to strengthen the bond between our clients.

From Deeds to LIS in 48 Days

The question is often asked why the City takes so long to become aware of a new property registration or the transfer of a property. Thus why does it on average take between 6 and 8 weeks from the date a new property or owner is registered in the Deeds Office before the City's Land Information System (LIS) is updated with a 'registered' property or new owner information?

The custodian of property registrations and ownership information is the Registrar of Deeds. A property or ownership only becomes 'legal' once it is registered at the Deeds Office. The City is informed of a change in property status or ownership through a weekly electronic transfer file from the Deeds Office. Before an electronic record is supplied to the City, there are several internal processes within the Deeds Office. The documentation is verified for completeness and endorsed with a title deed number (2 days), sent for scanning and electronic capture followed by a verification process (4 to 5 weeks). Once verified, the electronic record becomes available for inclusion in the file sent to the City in the following week. The registration date of the new title deed is the date documentation was submitted to the Deeds Office for registration. Approximately 80% of deeds records received by the City in March 2013 were processed by the Deeds Office within a 6 week turnaround time.

Upon receiving the file(s), the processing of the files poses several challenges. The file format is a 'fixed length' text file. A transfer record in the file consists of 64 different fields, up to 5 different line (rows) types and can have multiple rows per line type. A line type 1 contains the primary transfer information. The additional buyer information, additional seller information, endorsements and consolidation or subdivision information are part of line types 2 to 5. There is no key field to group different

line types per transfer and the same data field is used for different data entities depending on the property type. All property types (erven, agricultural holdings, farm portions, sectional title units) are included in the same file. Two files are received weekly as the boundary of the City is partially within the jurisdiction of the Pretoria Deeds Registry and partially within the Johannesburg Deeds Registry. The files include all transfers within Gauteng and not only within the City of Johannesburg.

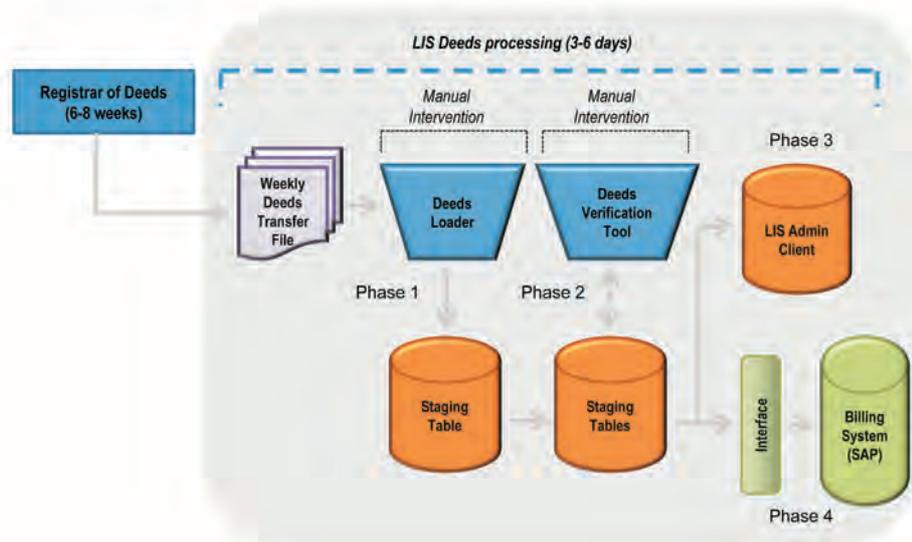
Apart from the file format inconsistencies experienced from time to time, there are several data anomalies that need to be addressed prior to loading the transfer data into LIS. Properties may be registered in the incorrect Deeds Registry or have an incorrect reference to a Province or Local Authority. Township names or Sectional Title Scheme names may be misspelled. Records may miss mandatory information for example a Seller Name or ID Number. The property description could refer to a remaining extent although the property was never subdivided. The sequence in which the records are received may be incorrect due to possible backlog capture in the Deeds Office.

Although the deeds files are loaded within a day from receiving it, records still need to be validated on an attribute level as well as on a spatial level. The processing and validation is done through complex programs and user interfaces. In the first phase, the file is loaded into a readable format and sifted to include properties within the City of Johannesburg only. Township names and Sectional Title Scheme names are corrected according to the master lookup tables in the LIS. Key fields e.g. a 26 digit property code (SG_ID) or a Sectional Title Scheme key is added as well as an ID to group related line types together. In the second phase, a property process code

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is added, thus is the record a result of a township establishment, a first time registration of a property or an ownership transfer only. These process codes determine the property status as well as the flow of the data within the Property Value Chain. Missing mandatory information is updated and the records are validated against the existing spatial data in LIS. Up to 25% of the records in a deeds file may require some manual correction. Only validated

records will process into LIS to display on the LIS Admin Client. Workflow triggers for the rest of the Property Value Chain including the interface to SAP are created simultaneously. More than 95% of all records received from the Deeds Office are validated, corrected and processed into LIS within 6 days. Thus from Deeds to LIS in 48 days



Creating a centric CGIS

The City of Johannesburg has embarked on the Revenue Step Change Programme to enhance the customer experience and improve revenue management in the City.

CGIS forms part of this programme under the process, data, customer and change management work streams. The change management work stream concentrates on the people - related and culture issues, in order to assist staff to better deal with the project changes.

A Change agent network was formed in CGIS which comprised of senior management, middle management and employees to assist the step change programme related communications and change management activities. The Change agent network consist of a Change Leader (CGIS Director: Marcelle Hattingh), Change Champion (Deputy Director - Projects and customer services: Lesley Adams), Sub Change Champion (Operational Manager: Petros Hlengwa), Change Agents (Manager: Yolanda Jansen Van Vuuren, Deputy Director: Vincent Mkhwanazi, Website administrator: Paulo De Jesus, Information Officer: Phindi Mnisi, Street address officer: John Khorombi). A Directorate Action Plan (DAP) for CGIS was developed from the answers received from the CGIS employees on the following 3 focus group questions:

1. What are the 3 things you enjoy most about your working environment?
2. If you had a magic wand, what are the 3 things you would change about your working environment?
3. What are the 3 things that you can do differently that would make a positive change?

Employee issues were identified via the focus group answers received and grouped into various objectives with an activity in support of achieving the objective along with measures of success, timelines, roles and responsibilities assigned to ensure that the activity take place. A change information blog was setup within the office as visual information updates, "have your say boxes were placed in the office for staff for their comments/concerns to be addressed. Report back is provided at the monthly staff meetings by the change agent network.

On 7 June 2013, the Directorate of Corporate Geoinformatics will be rolling out their directorate action plan.

The CGIS change agent network will be monitoring the implementation of the DAP.

Renaming of Municipal Roads, Streets and the R24 to Albertina Sisulu Road

At the Mayoral Committee held on 21 June 2012 it was recommended that the following 18 roads and streets within the City of Johannesburg are renamed to Albertina Sisulu Road: Allum Ext, Broadway Ext, Kitchener Avenue, Bezuidenhout Avenue, Market Street, Main Road, Central Road, Paarlshoop Street, Deville Street, Newclare Road, Maraisburg Road, 10th Road, Maud Street, Lola Street, Kathleen Street, Hamberg Road, Hoofd Street and Main Reef Road.

These streets run through the following townships: Bruma, Judith Paarl, Bezuidenhout Valley, Kensington, De Wetshof Ext.1 and Ext.2, Fairview, Industrial and Industrial Ext.1, City and Suburban, Johannesburg, Mayfair and Mayfair West.

Community Development will undertake the process of placing plaques and other appropriate signage and/or public artwork along Market Street and Main Reef Road, to memorialise their historical significance. Development Planning and Group Communications will deal with potential objections that may arise from the renaming.

Once approved, Development Planning will finalise all procedures to confirm the renaming by advising the Gauteng Geographic Names Committee, the Office of the Surveyor General, Registrar of Deeds, Postmaster General, Telkom, Community Development, JMPD, SAPS, JRA, CGIS and EMS.

In undertaking the renaming and the allocation of street addresses, CGIS engages with the neighbouring metropolitan authorities to ensure consistency in allocation of street addresses and that Regional Directors (Regions

F, B, C) place public notices at strategic and prominent locations along the affected route to notify the public of the new name and liaise with the JRA to ensure that the physical name changes are implemented timeously.

Phase I of the project is complete; this phase involved the capture of a single polyline running through all the affected streets in the various townships to represent the Albertina Sisulu Street centreline. The new centre line captured runs from Ekurhuleni boundary to Mogale City boundary. 100% complete for both CGIS centre line and JRA road links.

Phase II consists of the spatial capturing of the allocated street addresses on GIS as permissible street addresses. A 100% manual allocation of street addresses has been done on the cadastre. A 100% of the affected townships and stands covered in Phase I have been spatially updated with the new permissible street addresses. The street addresses are captured as permissible instead of actual for the time being to avoid having changes going through the LIS Admin Client and hence SAP before Phase III of the project is complete. Therefore deletion of the existing old street names has not commenced yet.

Phase III of the project is currently 50% towards completion and consists of delivering notification letters to all property owners affected by the street name and physical address changes within the various townships. This task is the most difficult and time consuming because the street address officers have to travel on foot to each and every affected stand within the townships, the most challenging being within the dynamic and hazardous Johannesburg Township.

ESRI South Africa Summit 2013 "a geofabulous experience"

It is almost time for the eagerly awaited annual Esri South Africa 2013 summit. The event will be hosted at the Champagne Sports Resort, Central Drakensberg from 7- to 9 May 2013.

Delegate registrations will take place on the 7th of May and the summit will commence on the 8th of May.

Professor Everatt, Executive Director of the Gauteng City-

Region Observatory (GCRO), will deliver the keynote address during the plenary session on the 8th of May, where after the summit delegates will break-away to the various sessions.

The summit has been structured into three parts:

1. Hands-on-training,
2. Interactive workshops consisting of:
 - a. Imagery and remote sensing and

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- b. Mobile solutions.
- 3. An information session, including the following topics:
 - a. GIS in the cloud,
 - b. Achieving success with Enterprise GIS,
 - c. Where are we going with the 3rd dimension and
 - d. Professional development in your organization.

A further session is reserved for developers to discuss Esri web API's, best practices, tips and tricks and code shootout.

The City of Johannesburg (CoJ), as an existing Esri Enterprise License Agreement Client (ELA), has been granted five complementary tickets to attend the summit. The tickets

include summit registration, workshop attendance, accommodation, meals and some refreshments.

Based on the summit programme, the following CoJ employees were identified to attend the event:

1. Etienne Erasmus (Corporate Geo-Informatics),
2. Paulo de Jesus (Corporate Geo-Informatics),
3. Justice Mudau (Corporate Geo-informatics),
4. Pete Ahmad (City Transformation) and
5. Ron Neeleman (JRA).

The summit will conclude on Thursday evening, 9 May 2013.

GIS Champion

A GIS Champion is a prerequisite for a successful GIS!

At CGIS we acknowledge this fact and annually award a floating trophy to top management for their support. Herman Pienaar from Development Facilitation and Implementation (now City Transformation) hands over the 2011 trophy to Community Development for the 2012 period. Congratulations to Jak Koseff and Nico Loubser

who used GIS extensively in their daily operations and to convey bold messages to politicians and colleagues in terms of community facilities and deprivation mapping. They have proven that GIS is the stage on which local government functions unfold and that, by using this stage, you are able to capture audiences and influence decision-making.



Annual International GIS Day

The International GIS Day hosted by Corporate Geo-Informatics (CGIS) is becoming a well-known annual event with clients, potential clients and employees within the City of Johannesburg (CoJ)

This year the event was celebrated on 16 November 2012 with the theme "A View From Above".

The event provided an opportunity to educate, demonstrate and raise awareness to clients and CoJ departments about Geographic Information Systems (GIS), Geography and

Geospatial Technology as well as highlight the various GIS services and products offered by the CGIS.

Over 200 visitors were able to view new GIS products including 3D Modelling, Building footprints, Joburg 2012 aerial photography, Pictometry, LIDAR and 25cm Contours and saw how these products are used within the GIS, and specifically how they can have a positive effect on a city such as Johannesburg.



CGIS is responsible for the management of the CoJ's spatial information and hosts and maintains the international award winning mapping website. One of the main attractions on GIS Day was the showcasing the first phase of the new mapping website and presentations were scheduled every 30 minutes from 09h30 to 14h00.



The new website is scheduled to be implemented during 2013.

More than 80% of all local government functions have a spatial component and GIS is a critical decision making tool for the City as a whole.



Making Joburg an equitable City for all

A group of City employees participated in the Hope-Mandeville Disability Careers Expo 2013 in March at the Hope School in Westcliff.

Johanna Mokale, Bernadette Rigney, Tebogo Fenyane and Priscilla Japhta said it was the first year that the City participated in what has become an annual event.

Exhibitors from Corporate Businesses, Higher Education and Development, Government, Disability Associations

and Placement Agencies interacted with five hundred scholars from 15 schools, each with a disability, and hundreds of whom have matriculated. Schools that participated represented learners with physical disabilities, the deaf and the visually impaired.

The Universities of Johannesburg and the Witwatersrand gave a joint presentation to the scholars about the options open to them after school, as well as on how to seek employment or tertiary education. They also discussed

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the implications and challenges of having a job. Pupils who were unsure of what career choices to make were pleasantly surprised by the varied, interesting and broad scope of careers the City offers. "We opened their eyes to all kinds of possibilities from architecture, town planning, social work and communications, so that many were left with a positive impression about the opportunities the City can offer as an employer of choice," Rigney said.



The City is seeking to meet its Employment Equity target of having a 2% workforce of people with disabilities. "The career expo helped the City to bridge the gap between being a prospective employer and finding young career-seekers." Contacts for recruitment agencies that can assist managers to employ people with disabilities were established. These can be obtained through the city's HCM department, from the city's supplier database or by emailing bernadette@joburg.org.za

Physically disabled encouraged and inspired to study further



Corporate Geo-Informatics (CGIS) was part of the GISSA Ukubuzana Conference held at Emperor's Palace on 3 October 2012. Various prizes were handed over to Grade 12 Geography Learners from Adelaide Tambo for the

Physically Disabled. Amongst the prizes were Gautrain tickets from Sandton Station to Pretoria and back to Sandton.

This was an opportunity to encourage and inspire disabled Grade 12 Learners to study further. The City of Johannesburg offers many job opportunities to people with disabilities. The Gautrain and Rea Vaya Bus drivers / security are trained to assist people with disabilities which enable them to be more independent.

On 15 March 2013, Bernadette Rigney, Charlotte Nkosi and Clifford Lebokela were privileged to accompany the Learners and Geography Teacher. Charlotte Nkosi explained the involvement that GIS had in completing one of Jozi's modern marvels. The day highlighted the importance GIS has in the development and future of the City. Most importantly it was an eye opening experience for the Learners. They enjoyed the experience immensely and saw how independent they can be in a working environment.