

KNSDI NEWSLETTER

A newsletter from the KNSDI Secretariat

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The Project for Strengthening Survey of Kenya for GIS Promotion in the Republic of Kenya

We warmly welcome you to the KNSDI activities of the year 2008. This 6th edition of our newsletter and the first in this year highlights on developments toward a functional Spatial Data Infrastructure in Kenya. The release dwells on activities and events

since the previous release, which include;

- The KNSDI Standard Seminar III
- Launched KNSDI pilot clearinghouse
- Reports from thematic groups
- Upcoming events

KNSDI STANDARDS SEMINAR III

The seminar was held on 21st February 2008 at La Mada Hotel, Nairobi, Kenya. Eighty three participants attended. The theme was **“Application of standards for spatial data building and sharing”**. The objectives of the seminar were:

- Updating stakeholders on the progress
- Launching KNSDI pilot clearinghouse
- Sensitizing on application of Standards documents
- Finding the way forward

**Mr. Kombo Mwero: Permanent Secretary
Ministry of Lands**

The seminar was officially opened by the Permanent Secretary, Ministry of Lands, Mr. Kombo Mwero.

He extended gratitude on behalf of the Kenyan Government to the Japanese Government for all the support they have accorded. He pointed out that the success of the project depended on Kenyans to make sure it progresses as expected.

He added that all Standards documents address issues on a datum for data sharing and exchange.

The permanent Secretary cautioned participants that, documents should not be prepared, put on shelf and forgotten.

About KPGIS, he stated that it is a special document which is going to be utilized to set geo-data standards in Kenya. He acknowledged that different organizations have set up clearing houses but the consensus is towards data sharing. He thanked all for their continuous support.



From left: Mr.NAKAZAWA, Mr. Mwero, Mr.Murage and Mr. SATO during the seminar.

Mr. Toshiyuki NAKAZAWA: JICA-Kenya Resident Representative.

Mr. NAKAZAWA, on behalf of the JICA-Kenya Resident Representative, thanked the participants for making time especially during this trying period but highlighted the importance of the seminar being a continuation of the second seminar.

He noted that we have the draft documents, draft standards and all of them highlight the importance of data sharing towards the final phase of the project. He encouraged everyone to be involved in the endeavour to organize data for establishment of geo-information and looked forward for continuing support and application of standards



February 2008 KNSDI Japanese experts: From left Mr. SATO (Chief Advisor), Dr. Lei (Clearinghouse) & Mr. YAMADA (Standards)

Director of Surveys/ Project Manager, Mr. E. M. Murage

The Director welcomed all participants to the seminar and reminded them that the project is not a SOK affair but it is for all the stakeholders.

Deputy Project manager, Ms. Pauline Gitimu - SoK

Mr. Odhiambo on behalf of the Deputy Project manager reminded the gathering that KNSDI was started about 6 years ago and aimed at establishing a national spatial data infrastructure for data sharing. He pointed out that Survey of Kenya was given the mandate to spearhead its establishment.

PRESENTATIONS

Different presentations were made, during which a number of questions and answers arose.

Presentation: An Experimental Project on improving usability of KPGIS and other related documents; by Ms. Lucy Chepkosgei - SoK

Question 1: Since coding is very necessary and vital, was there any coding done?

Answer: Coding was not done directly but through the UML drawing software.

Question 2: Concerning the UML diagrams, you have said you classified according to geometry type of the features (Point, line and area), is it the duty of KNSDI or stake holders to do it the way you proposed with each being on its own?

Answer: We categorise the dataset as per geometry when drawing the UML static diagrams. The KPGIS is just a practical guideline of doing it.

Presentation: Digitizing standards; by Mr. F. Kimotho - SoK

Question 1: How do all these fit together? (Database management & the manuals)

Answer: We use the manual as guide to create the data base

Question 2: We need spatial reference table, is it prepared by the software or does it come prepared?

Answer: ISO gives the guide lines but each user comes up with the information to fill the table.

Question 3: You keep talking about small error of 0%. What does it mean? How possible is it to achieve 0% error?

Answer: 0% percent error should be maintained for boundary and control points



Presentation on experimental project on improving usability of KPGIS and other related documents

**Presentation: Data Sharing
Kenya Wildlife Service experience; by Mr. R. Odongo - KWS**

Question 1: How recent is your data?

Answer: Data is timely depending on the usage. For example ecological program reports in every 3 months.

Question 2: You have several datasets but they seem to be inter-related. Do you have different ways of collecting it?

Answer: Data is managed by stand-alone systems while in other cases is linked directly to GIS

**Presentation: Data Sharing
NGO experience; by Ms. L. Waruingi – African Conservation Centre (A.C.C)**

Question 1: There is a perception that NGOs are only data consumers and not builders. So how will they contribute to KNSDI?

Answer: NGO'S do not just want data but they also give. Data is both give and take.

Question 2: What are the strategies on resolving conflict in data sharing, because you talked about spatial data sharing as being more of relationships than technology?

Answer: In the exchange theory, it should be about metadata but there should be nominal elements which should be charged at a low price.

**Presentation: Data Sharing
Regional Centre for Mapping of Resources for Development experience; by Byron Anangwe - RCMRD**

Question 1: Since RCMRD is a regional organization will you incorporate the KNSDI standards or you have your own standards and if member countries have different standards how will they be incorporated into one standard?

Answer: Kenya standards are RCMRD standards. We will incorporate the KNSDI standards, since everyone is working towards ISO standards

Question 2: You have a portal, how does one access it?

Answer: To get into our portal, just go to Geo-Network and login

Question 3: You use three different metadata standards. What are the efforts being made to make sure they are standardized?

Answer: There is a committee overseeing the data standards as related to ISO Standards.



Participants attentively following the proceedings

Presentation: Metadata Creation; by Mr. J. Mwairo - SoK

Question 1: Why use latitude/longitude?

Answer: Because it is universally applicable.

Question 2: What did you mean by saying that the layers are in 1:2,500 and: 5,000 scale?

Answer: The scale is a print out scale, but data itself has no scale.

Question 3: The cost of Ksh. 3000/=, is it per layer?

Answer: The data is costing Sh. 3000 per layer per sheet of 3 square Km.

Question 4: If I buy the data, can I resell?

Answer: When you buy data you state its use and you should not resell

Question 5: How current is the Data?

Answer: The data is for the year 2003 and 2004

Question 6: Do you have any free data?

Answer: Metadata is free and currently no free data.

Presentation: Database Management; by Mr. R. Asiele

Question 1: Can one use any other software other than ArcSDE

Answer: Yes one can, however ArcSDE communicates well with other database management softwares

Question 2: What made you use Oracle other than SQL or Access? Why Oracle?

Answer: So far Oracle is one of the best on offer and it has many capabilities

Presentation: GIS Training: by Mr. J. Odhiambo

Question 1: Most popular was the potential users course, are you able to assess whether

maximum benefits or returns were attained?

Answer: The main goal of the training was to bring many people onto GIS platform in order to realize the success of KNSDI which was attained.

Question 2: Did you give any softwares to the trainees?

Answer: The participants were given 2 free softwares for GIS (Q-GIS & ILWIS).

Question 3: Which other open source softwares are available other than Q-GIS and ILWIS?

Answer: There are other free softwares but cannot remember them off-head.

Clearinghouse; by Mr. T. Muturi

Question1: To create the confidence of the portal users, what is the security measures put in place?

Answer: No data is kept in the GIS PORTAL so there is no security problem. Only the sample data and metadata resides in the portal.

Question2: In order to access the portal do I need a password to login?

Answer: You don't need a password to access the portal; it is only the administrator who needs a password to login.



Participants during a tea break



Participants taking lunch

DISCUSSION SESSION: Chaired by Jess Grunblatt - DEPHA

Comment: People should think of new ways to do business. Google Earth is basically free service yet they generate income.

In 1987 few people were on GIS but now we are talking about data sharing while then there was no data to talk about.

Question1: Is it conceivable to generate some fundamental data in public organizations for public use free of charge?

Comment: SOK is actually in the public domain. The golden chance was in the Media/Information bill. There was an effort to make information from public institutions freely available to the public.

Comment: The information Bill has to do with making information from public institutions available to the public at no cost. So the only fee the institutions will charge is just the administrative fee. Why should the public be made to pay again for information they have already paid for? By disseminating the data to smaller companies there will be creation of jobs and wealth to the nation.

Comment/question: There should be an agreement to make some basic data freely available even before the bill is passed. SOK should think of availing some data at a nominal charge.

All of us should think of the basic data needed that can be made available to the public e.g. Wildlife information, for instance, in some cases donors give grants to collect information.

Comment: In USA they offer basic data free. In this regard, there is a bigger market for the same as compared to Europe where their policy is not as flexible as USA.

Comment: SoK has been giving data almost free of charge. The only charge they do is to cover the cost of reproduction.

Comment: On the issue of pricing, as partners, a policy should be prepared and a decision made. We should think of pricing, security and intellectual rights.

Comment: How can the City Council which plays such an important role in spatial data be incorporated in KNSDI policy making?

Question: Do we have a complete Kenyan standards document? Does it specify the ISO standards we are going to adopt?

Response: KPGIS concerns working on the geographic standards. It includes only six of the ISO standards extracted from the over 40 ISO standards. So far no organization has been able to utilize them.

Question: In the second seminar two KPGIS standards were ready, how far have we gone and are there updates?

Response: There are six standards ready, it is for all of us to conform and utilize them.

Comment: Normally in application of standards there is a problem in communication

between project manager, operator, producer and user to user

Question: What is being done on the already existing data to make it conform to the standards?

Answer: The GIS section in SoK is working hand in hand with KNSDI to make their data conform to the standards.

Question: Is the Department of Defence (DOD) restriction on topo-maps selling still in effect?

Answer: The restriction is still there and hopefully we will find a way to do away with it.

RESOLUTIONS

The following were agreed on as the resolutions for the Seminar III;

1. Finalization of data capture manual
2. Users to apply the manual and give feedback on the same.

LAUNCHED KNSDI PILOT CLEARINGHOUSE

KNSDI launched a pilot clearinghouse during the Standard Seminar III. The stakeholders and invited guests were informed on how the clearinghouse operates.

The clearinghouse will be used by the government; local authority and public in searching who has what and how it can be accessed. This will be possible if the data producers publish their metadata in the clearinghouse.

KNSDI Clearinghouse is available using the following link: <http://212.49.76.177:8080/portal>
It is been developed using ESRI GIS Portal Toolkit - A Software Development kit for a GIS Portal

3. Finalization of policy on data costing.
4. Finalization of the Metadata standards
5. Finalization of the geospatial data policy
6. Acquisition of a domain e-mail address.
7. Improvement of the internet connection

VOTE OF THANKS

Mr. Owino of SoK, thanked the participants for having well attended the occasion; he was impressed that the theme was well covered. He added that the program for formulating data standards was started in the year 2001 and it is a good experience for various organizations and Kenyans are happy for data sharing. He also noted that we are in the second phase of promoting use of GIS in the country.

For more information on the presentations and Standards manuals please visit our website page; <http://www.knsdi.go.ke>

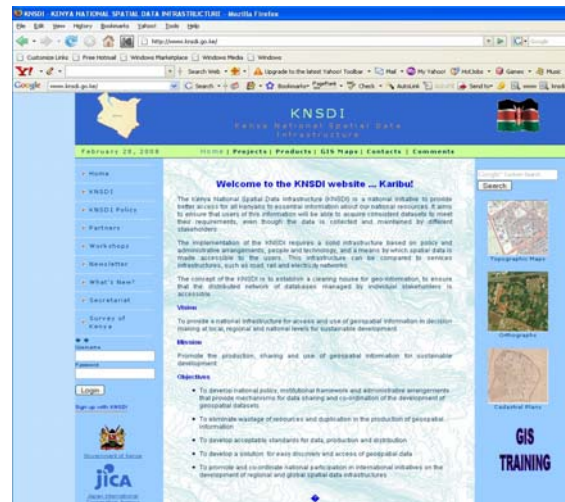


Clearinghouse: <http://212.49.76.177:8080/portal>

Apart from the Portal the clearinghouse working group also updates the KNSDI Website regularly which has been used successfully in passing information to the public especially in the advertisement of e.g. GIS trainings.

The working group also receives acknowledgements, comments and enquiries through the KNSDI website.

Visit our website for; standards documents, seminars' proceedings upcoming events and important links.



Website: <http://www.knsdi.go.ke>

REPORT FROM THEMATIC GROUPS

Standards Working Group

Kenya Profile for Geographic Information Standards (KPGIS) documents contains six reference standards.

Based on the KPGIS and its related documents the standards team did an experimental project on a small dataset;

- To verify technical applicability
- To verify product specification,
- To do quality evaluation.

The results of the experiment were presented in the KNSDI Seminar III.

The team is working on the improvement of the KPGIS and the proposed KNSDI fundamental features product specification

Digitizing Working Group

Three map digitizing manuals are now complete and awaiting publication. They are as follows;

1. Thematic Map Database Manual

2. National Digital Topographic Map Database (1:50,000) Manual

3. Topo-Cadastral Map Database (1/10,000) Manual

Attached to the manuals are five (5) accuracy control measure forms;

Form 1- Analyses the control measures to be carried out on the materials (paper print, plastic print reversals or any other media from which data is extracted) before scanning.

*Form 2-*Analyses the control measures to be carried out on the scanning software.

Form 3- Analyses the control measures to be carried during the geo-referencing of images.

Form 4- Analyses the control measures to be carried out on printed paper maps' registration errors during image geo –referencing

*Form 5-*Analyses all categories of features which were inspected during the control measures.

GIS Training Working Group

In the upcoming events of the previous edition was the JICA-Net Video Conferencing Seminar. The seminar was held on schedule. Forty participants turned out, with thirty nine getting certificate of participation. The course was meant to equip participants with advanced knowledge in emerging fields.

It covered;

- Satellite remote sensing and space mapping
- Airborne digital photogrammetry and laser scanners
- Digital earth and web mapping services
- GIS software and data format
- Geoinformatic project management

Data Base Management Working Group

The group created a geo-database

The objective of creating the database was to establish a digital collection of spatial data for the country and provide a multi-user environment for the data.

GIS softwares on their own have the capability to store large amount of data, however they do not provide a multi-user environment.

The following softwares were used: ArcGIS, ArcSDE and oracle. A combination of any other GIS software, ArcSDE and various commercial DBMSs is also possible.

ArcSDE is a link software that provides a gateway for storing, managing, and using various spatial data formats in a DBMS.

ORACLE provides client access to data and uses indexes sequences, and other database objects to facilitate data creation, editing, and access.

After installing ArcGIS and Oracle, we installed ArcSDE, did its post installation; and created the database.

Database creation involved customization, configuration changes to suit our needs and creation of a user account. The database is able to hold various formats of spatial data.

So far we have done the importation of data (in shapefile format) covering Nairobi into the database. This data is for the 1:2500 and 1:5000 sheets. We intend to do the same for other areas of the country and then continue to manage this data by updating it frequently.

Metadata Working Group

Creation of Metadata for the Nairobi City 1:2,500 map sheets have been completed.

This data was created in conformity with the Kenya Metadata Profile (KMP2.0)

A sample of this metadata was shown and the input process using the Arc Catalog demonstrated during Seminar III

The creation of metadata for the 1:5,000 map sheets is still in progress.

Thereafter, metadata for all the existing data sets in Survey of Kenya will be created using the same procedures.

UPCOMING EVENTS

Hands-on training on KNSDI products

The hands-on training is aimed at creating awareness as well as sensitizing on use of the Kenya Profile for Geographic Standards (KPGIS) and other related documents.

Date and venue of the training will be published on our website.

GIS Training

Watch out for more information about the GIS Training to be held in the month of October/November.

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