



DATA BASE MANAGEMENT SYSTEM(DBMS)

Progress report
DATABASE MANAGEMENT
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Presentation Outline

- Introduction
- Objectives
- Progress
- conclusion

(1).Introduction

WHAT IS A DATA BASE?

- . A collection of related data organized for efficient retrieval of information.

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- A logical collection of interrelated information managed and stored as unit, A GIS database includes data about spatial location and shape of geographic features recorded as points, lines, areas, pixels, etc as well as their attributes

Database management system (DBMS)

- ❑ A set of computer programs for organizing the information in a database. A DBMS supports the structuring of the data base in a standard format and provides tools for data input, verification, storage, retrieval, query, and manipulation.

Advantages

- Maintains the consistency of data while supporting Multi-User Environment, simultaneous access by more than one user.
- There is Security of data; only the system administrator has all the system privileges over the database.

Advantages

- Can support complex data objects, larger queries and stronger transactional support, without duplication of efforts.
- There is Backup and recovery functions to avoid loss of data.

(2).Objective

- To come with a Digital Database for The spatial data of the country.

3)progress

- The software's used
- ArcGIS
- ArcSDE
- Oracle

ArcGIS Software

- ArcGIS on its own has the capability to store large amount of data (e.g. File Geodatabase), however it can not provide a Multi-User Environment without the help of ArcSDE and a commercial Database, only one user can access the data at a time.

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- For ArcGIS to be able to communicate with DBMS their must be a bridge. ArcSDE conveys spatial data between (GIS) applications and database. The database may be any one of the supported (DBMS), in our case Oracle 8i

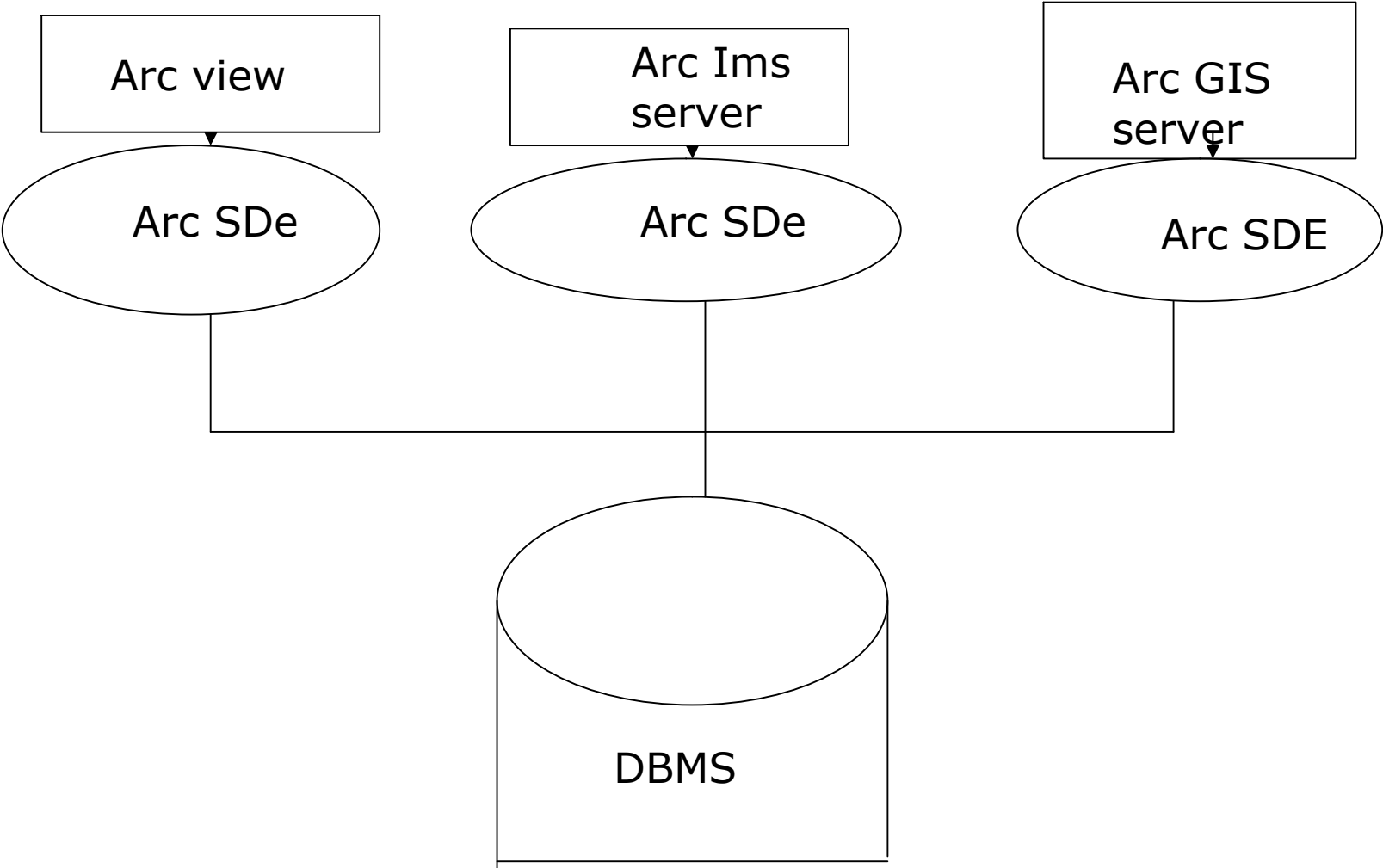
ArcSDE Software

▣ ArcSDE

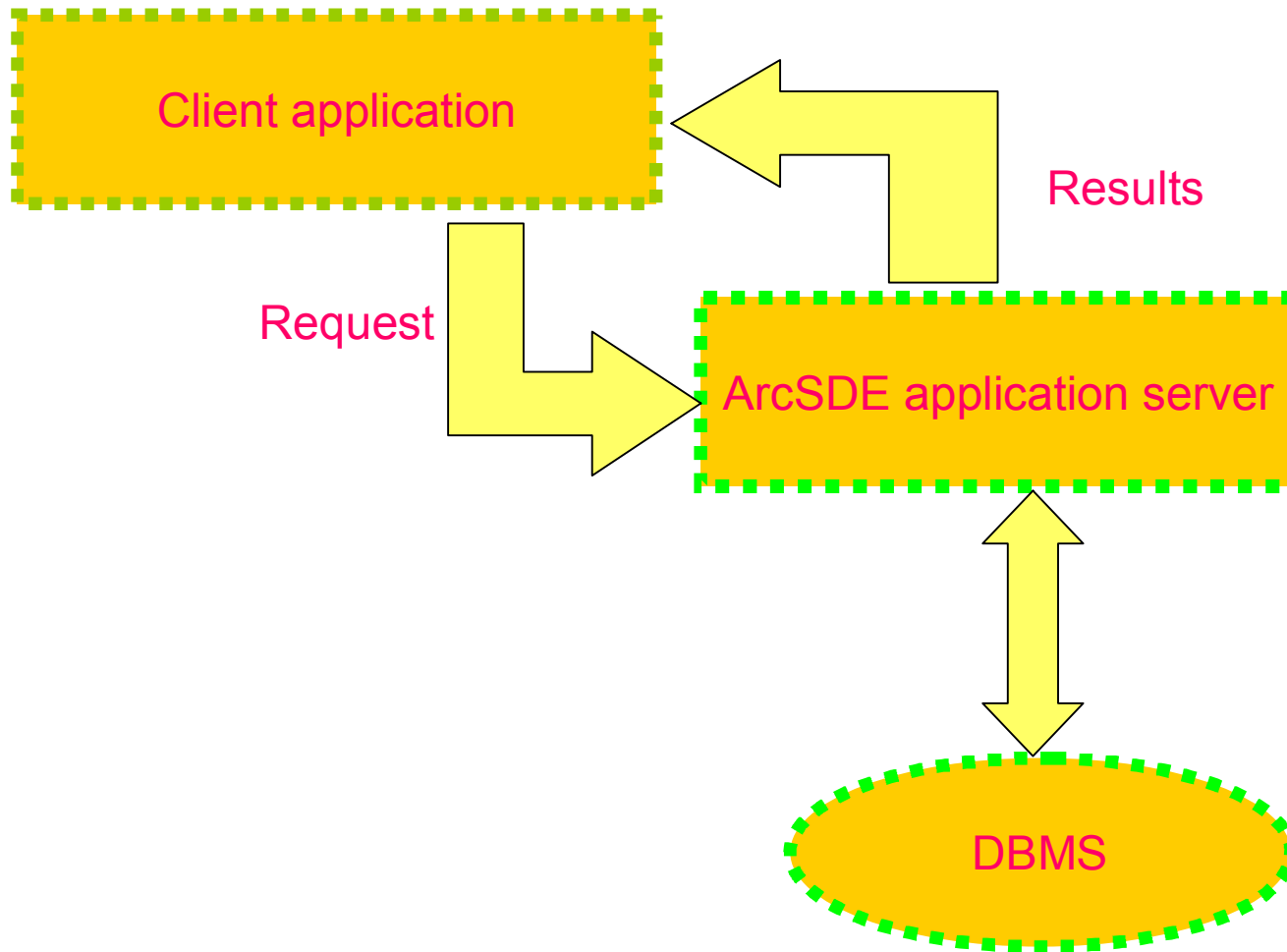
It is a server software that provides a gateway for storing, managing, and using spatial data in a database management system e.g. Oracle. Therefore the support for spatial data in a DBMS is provided via ArcSDE.

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- Arc SDE enables one to use following Esri products ArcGIS, Arc IMS, Arc Info, Arc view, etc to store, use and manage GIS data in commercial DBMS e.g. IBM Informix, Ms SQL server, IBM DB2 etc.

This graphic shows an example of the various ways you can configure ArcSDe



ArcSDE handles simultaneous requests from multiple users to update and retrieve information in a Geodatabase



Oracle Software

▣ Oracle

It provides client access to data and uses indexes sequences, and other database objects to facilitate data creation, editing, and access. It is the DBMS

So far.....

- We have done the importation of data covering Nairobi into the database (shapefiles format). We intend to do the same for other areas of the country.

conclusion

- ❑ ArcSDE is a GIS gateway to DBMS.
- ❑ You can import various formats in to the same database, the data can be Shape files, Coverage's, CAD files, Images (jpeg, tiffs etc.), TIN Surface (3D), Grids, Database tables etc. All the data sources can be imported to one database.

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- Combination of Any GIS software, ArcSDE and DBMS ensures that there is no limit on the size of your spatial database and there is ability to serve many concurrent users anywhere on a network.

Thankyou

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