The logo for CLIMSOFT features a stylized graphic on the left consisting of overlapping colored squares (blue, red, yellow) and a black crosshair. To the right of this graphic, the word "CLIMSOFT" is written in a bold, black, serif font.

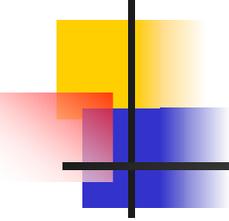
**CLIMSOFT**

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*Presented by*

**Albert Mhanda (Zimbabwe)**

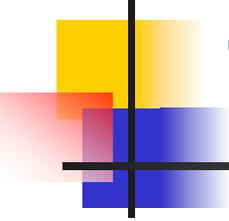
CDMS Evaluation Workshop, WMO, Geneva, Switzerland (27 May – 1 June 2002)



# Background

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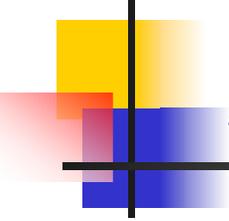
- CLIMSOFT – acronym for CLIMatic SOFTware
- Team product
- CLICOM Workshop, ACMAD, Niger, May/June 1999
- Model designed by instructors and participants
- Based on Logbook, some entities from Clicom & Clidata
- Developers: B.A. Aziz (Guinea), S. Machua (Kenya), P. Muraya (Kenya), A. Mhanda (Zimbabwe)
- Documentation: (Statistical Services Centre, The University of Reading)
- Targeted at small to medium scale databases, but can scale up.
- System currently being used in Zimbabwe



# Tools used

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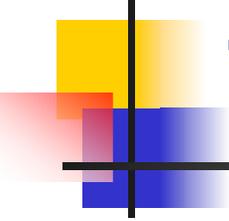
- Visual Basic 6
- Microsoft Access 2000
- Logbook
- Inno Setup



# Advantages of Tools Used

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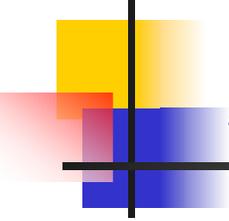
- VB: easy to develop user interface, good at DB programming and automation, training readily available
- Access: powerful and easy to use, generally available in most organizations, training is cheap and readily available
- Logbook: excellent data transfer utilities, functions easy to plug in, comes free with Climsoft
- Inno setup: very good product for setup, easy, free



# Typical Requirements

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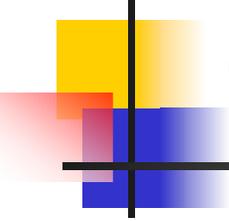
- Pentium III with 64 MB Ram (not tested on lower spec PCs)
- Windows 98/NT/2000/Me
- Microsoft Office 2000 (Access 2000)



# Advantages of Requirements

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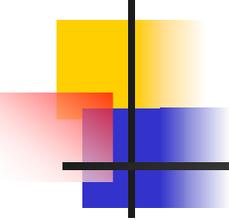
- Generally no extra costs, Windows and MS Office widely available in most organizations
- Relatively cheap, if there is need to buy
- Some knowledge of Access likely to be available in most organizations
- Local support available
- Local training readily available and cheap



# Requirements (disadvantages and *solutions*)

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- Access DB has storage limit of 2GB. *This can be overcome by segmentation or upsizing to backend DBMS e.g. Microsoft SQL Server.*
- Organization may have mostly lower spec PCs. *These can still be used for simple key entry e.g. into spreadsheet, then data imported into Climsoft.*

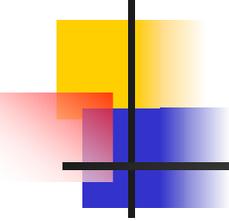


# Data Model

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- Fully normalized relational model
- Data stored in most elemental form
- One table for all observations
- Observations stored in one column

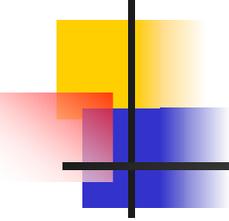




# Advantages / Strengths of Model

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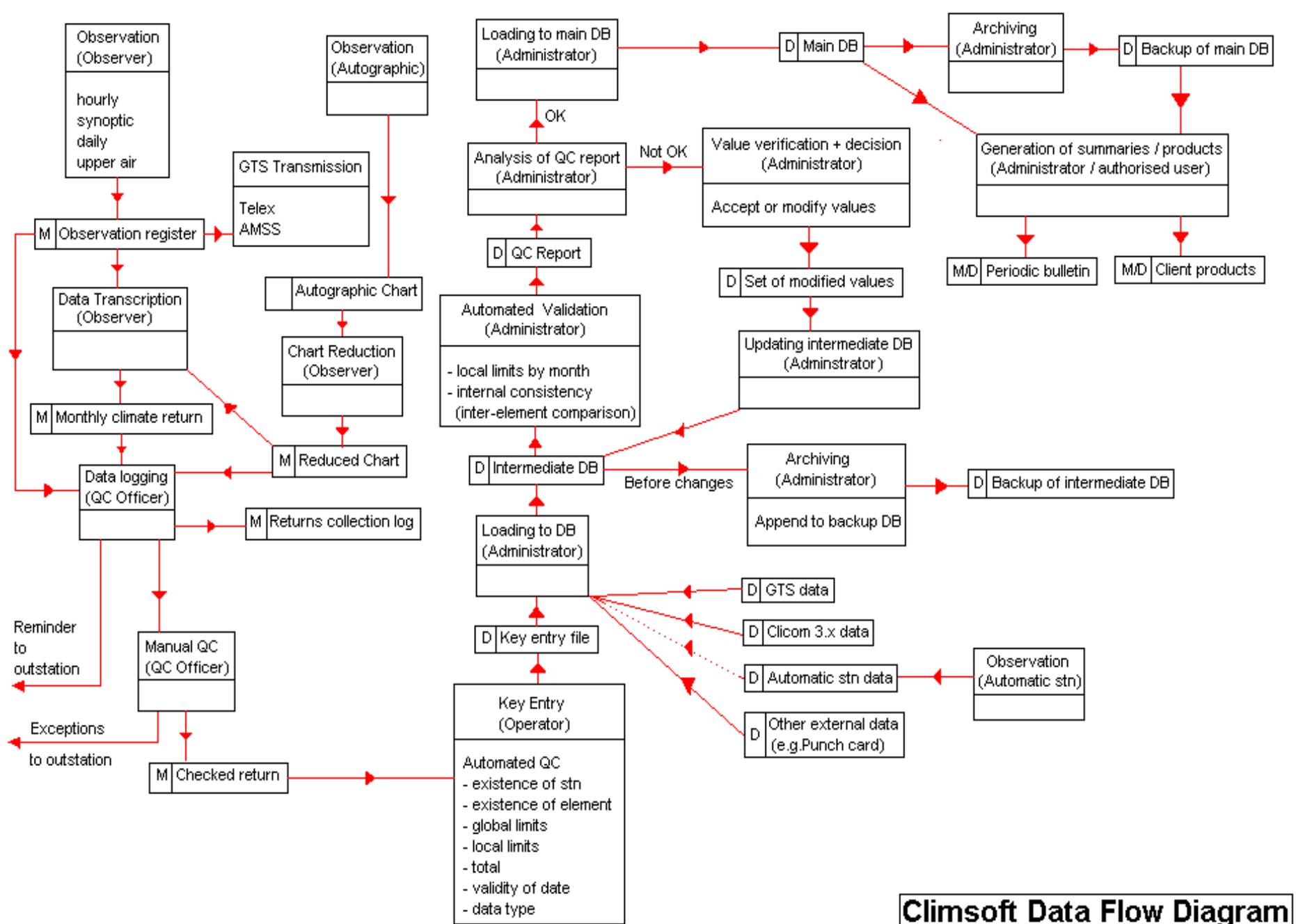
- Little or no need to modify design, in order to accommodate new type of observation
- Design is platform independent
- Very easy data extraction
- Easy data manipulation



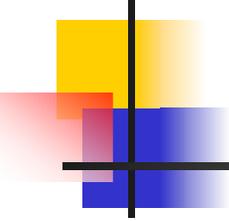
# Model (Disadvantages & *Solutions*)

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- Large storage space required. *Modern storage devices have the capacity. Typical size for Rainfall data in Zimbabwe is 600MB, other daily data ~ 1.4 GB*
- Too many records, implying slower data retrieval. *Database segmentation(e.g. in Zimbabwe separate databases for rainfall and other elements). Most common data requests take a few minutes. Clients requiring large volumes of data e.g. researches normally prepared to wait for a day or more.*



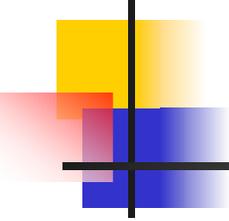
**Climsoft Data Flow Diagram**



# Key Features of Climsoft

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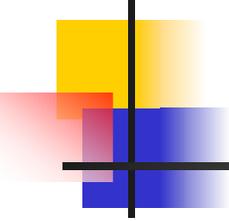
- Very easy to install
- Simple and intuitive GUI
- Key-entry module with many QC checks (e.g. range checks, total, data type, date checks)
- Straightforward way of adding customized key-entry forms
- Inbuilt facilities for data import from Excel, text formats e.g. csv, CLICOM, GTS. Ability to customize import from other ODBC sources



# Key Features of Climsoft (contd)

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- Simple loading of data from key-entry file into database
- Post key-entry QC (station and month based range checks, related element checks)
- Simple management of metadata
- Wide range of products and summaries (inventory, daily, dekadal, monthly, annual etc)
- Easy export into different formats
- Straightforward way of adding custom products
- Ready for use in English and French, with easy facility to add other languages



# Future Plans

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- Improved GUI based on MDI (with tree view)
- Double key entry (use of grid input)
- Ingestion of data from AWOS
- More GTS inputs & outputs
- Additional QC features
- Graphical products, links to other packages e.g. Excel, Surfer.
- Possible use of open source backend databases e.g. MySQL
- Setting up of help desk, discussion group