REGISTRATION OF A PROJECT

SUGGESTION NUMBER: 1576/28/02/1997: EXCHANGE DATABASE

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EXCHANGE DATABASE:

1. Reasons

A DataBase was needed for our own local use at our Telex Exchange for the following reasons:

1.1. Our records were written in files or books, namely TDM (for the Databit 4650 and T50B TDMs), 927 TDMs & VFT, SEU, HPA, Junction, and Private Wire Files. Although a SAG File was available, there were no facilities available in that file to document used SAGs against assigned Circuit Numbers. The overall result was the following:

1.1.1. Circuits were being duplicated or incorrectly and/or illegibly written.

1.1.2. Circuits were being half erased - it was then not known for certain whether that circuit should exist or not.

1.1.3. Files were not always kept up to date (mainly due to the fact that pencils and erasers were not always available).

1.1.4. Files kept going astray.

1.1.5. A quick and accurate search for a specific circuit (or some part of a circuit) was impossible.

1.1.6. Whenever an outside faultsman called to test a circuit, he had to supply the EDS O/G point or at least indicate what system and channel that circuit worked on.

In short, time (and therefore money as well) was being wasted.

1.2. Accurate statistics is of vital importance in any organisation, and even more so in Telkom: it is senseless, for example, in maintaining 5 TDM systems (each with 46 channels) to a certain area whereas 3 TDM systems would be more than enough. In the past, "accurate" statistics were calculated with figures from the actual exchange combined with the information from the New Installations' DA DataBase. A complete and total monthly break-down was not possible.

1.3. Because our Telex Exchange is the International Gate-way of Telex and Teletex traffic between South Africa and the rest of the world, we are open and operational 24 hours a day. This means that we need access to accurate records 24 hours a day.

2. Solution

An easy to use with very little fuss Exchange DataBase was needed. Not only had it to be easy to use, but it also had to be accessible to anyone at our exchange any time - this meant that the Exchange DataBase had to be designed to be able to work on a Network.

3. Benefits

3.1. Time is money, and time and money is saved. Time is saved because data can be retrieved quickly and accurately. Money is not only saved because of the time factor, but it is also saved because the "special" paper for the files, pencils are erasers are no longer needed.

3.2. Although there are no password inputs required in order to execute any of the Exchange DataBase Programmes, each station (computer), however, has to be "registered". There are currently 12 (twelve) "registered" stations. By using this security method, the retrieving of data is quick. Furthermore, there is no time-up facility (which further reduces any aggravation).

3.3. Searching is virtually limitless: a person can search for a record (or circuit) on any of the following:

3.3.1. Circuit Number;
3.3.2. SAG Take-up / Concentrator Bundle Number;
3.3.3. ILN / ICSN ;
3.3.4. Bundle Number (Collective Number Group);
3.3.5. Client Name;
3.3.6. Client Telephone Number;

3.3.7. Circuit Status (i.e. Normal, DA Pending, Linked, Check, and Off-Line Circuits);
3.3.8. DA Type (i.e. New Installation, Out-Door Transfer, JH2 EDS Proposed);
3.3.9. DA Number;
3.3.10. System and Channel;
3.3.11. Service Type (Teletex) / TDM Position;
3.3.12. Low Level (Modem / SEU / HPA);
3.3.13. High Level (Modem / SEU / HPA);
3.3.14. EDS Out-Going Take-up; and
3.3.15. Remote In-Coming Take-up.

For example: Quite recently, an outside faultsman called and gave me a Private Wire Circuit Number which I did not recognise. The closest take-up he could give me was that in Joubert Park. The take-up he gave me did not agree with any of the Joubert Park take-ups. He also could not give me the Client's company name, but he could and did give me the Client's telephone number. The result was that I found the Circuit, and I was able to help him. If we did not have the Exchange DataBase, I would not have been able to help him!

Browsing from record to record is also made possible.

3.4. Circuits cannot get duplicated. The only time when a Circuit Number is allowed to be duplicated is for Out-Door Transfers, Linked, and JH2 EDS Proposed Circuits. Circuits can never get triplicated.

3.5. Circuits cannot be misread due to illegibility.

3.6. Circuits are either in the DataBase or it is not in the DataBase. In the old filing system, there were some circuits that were half erased, so one was not too certain if that Circuit was suppose to exist or not!

3.7. Of the 12 (twelve) "registered" stations (computers), 11 (eleven) of them are in the exchange area, namely KPL Room, Private Wires, New Installations and TDM/VFT sections, and the WorkStations. It is not as easy to move a computer as it was to move a file, therefore the chances of a "file" going astray is reduced. Furthermore, more than one person can now access the same "file" at the same time.

3.8. Because pencils and erasers are no longer needed, it is now far easier to maintain the records accurately. Any one record cannot take the same route or use the same take-ups as another record.

3.9. A comprehensively detailed statistics is readily available. Each time the statistics are recalculated, all that information is saved into a text file (which is also readily available for viewing at any time). At present, the statistics are recalculated on a monthly basis which then becomes available within half an hour. Labour costs are now saved: in the past,

the statistics had to be manually calculated and were only available months later! Due to the changes that are made on a daily basis, and due to the long time period that it took to manually calculate the statistics, it therefore meant that the statistics could not be guaranteed to be 100% accurate. Furthermore, to manually calculate the statistics, it took up many man hours which could have been put to better use elsewhere.

3.10. The previously written DA DataBase has also been incorporated as part of the Exchange DataBase programmes. This means that whenever a DA has been completed, the records of the Exchange DataBase are also automatically updated.

4. Costs

The costs listed below (paragraph 4.1.1. to 4.1.4.) are costs per occasion (both old and new), and its total is listed in paragraph 4.1.5. The annual costs are listed in paragraph 4.2.

4.1. Costs per Occasion

	Old Filing Method	***New DataBase Method***
4.1.1.	***Vurester Paper and Stationary:***	
	R 1,637.50	R 0.00
4.1.2.	***Cost of salary time to update the records:***	
	Max 6 weeks (30 working days) = R 8,588.25	Max 30 min by Computer = R 0.00
4.1.3.	***Cost of salary time to locate a record:***	
	Max 30 min @ R13.63 x 2 = R 27.26	Max 1 min @ R0.45 x 2 = R 0.91
4.1.4.	***Cost of salary time to count the statistics:***	
	Max 8 working days = R 2,290.20	Max 30 min by Computer = R 0.00
4.1.5.	***Minimum Grand Total Cost:***	
	R 12,543.21	R 0.91

4.2. Annual Costs

4.2.1. Paragraph 4.1.1. above is already an annual cost. (*Use formula: Cost x 1*).

4.2.2. Paragraph 4.1.2. above was executed (Old Filing Method only) on average twice a year. (*Use formula: Cost x 2*).

4.2.3. Paragraph 4.1.3. above is impossible to calculate accurately to obtain an annual cost as no single day is the same as any other day. (*Use estimation formula: Cost x 260 working days x 10 faults per day - please note that this formula is extremely lenient: JH2 EDS is open and operational 24 hours a day all year round*).

4.2.4. Paragraph 4.1.4. above was and still is executed on a monthly basis. (*Use formula: Cost x 12 months*).

4.2.5. Estimated Maximum Annual Grand Total

Old Filing Method:	R 117,172.40
New DataBase Method:	R 2,366.00

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