

Database Management for Effective Works Monitoring

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Abstract: In this smart age of information technology, the “Information” is God. Timely retrieval of information through database and conveying the information correctly to the right source is the key to effective management. The use of database management in day-to-day working differentiates the Executives from those ‘Traditional Managers’ with ‘Smart Managers’. The inventory of database is important, but more important is to retrieve the data when required in the fastest possible speed. As executives in Military Engineer Services (MES), we are at the helm of works management right from inception to inauguration stage. Each work can be identified through various parameters. Each parameter is important and has different significance to various agencies at different stages and has different connotation to various executives in hierarchy. We do have monitoring tools in our organization and ‘Reports and Returns’ do serve the purpose of regularly updating of works progress, but need of the hour is to have data in the hands of working executives almost every time. The data can be used to give on-spot feedback as-and-when required on the go. The on-hands data gives the executives an independence, which reduces their dependency for calling on reports and returns whenever any feedback is required either by higher headquarters or users including third party agencies. The upkeep of data and carrying the same has become much more easier now in the age of smartphones and cloud drives.

1. INTRODUCTION

A database management system (DBMS) is computer software designed for the purpose of managing databases. DBMSs are typically used by Database administrators in the creation of Database systems. DBMS enables the user to store, modify, and extract information from a database. There are many different types of DBMSs, ranging from small systems that run on personal computers to large systems, which run on mainframes. Database software allows users, who are not programmers, the ability to pull data from a specific database, and make that data into user-friendly information. The DBMS accepts requests for data from the application program and instructs the operating system to transfer the appropriate data. Computerized library systems, automated teller machines, flight reservation systems, and computerized inventory systems are some of the examples of the database applications. When a DBMS is used, information systems can be changed much more easily as the organization's information requirements change. New categories of data can be added to the database without disruption to the existing system. Typical examples of DBMSs include Oracle, IBM's DB2, Microsoft Access, Microsoft SQL Server, MySQL, 4th Dimension and FileMaker.

Effective organization and timely retrieval of data is a critical task for the productive management. Before organizing the data, it is essential for the executives to collect pertinent information about the strategic data required for effective monitoring of the works. In this concern, various database systems can be utilized. For effective management of the works monitoring and timely retrieval of data, the executives should make use of the data oriented model/software well suited as per their understanding of the data base management systems they are going to use and the devices which they are going to use for the retrieval of data as and when required. Some of the important database systems in vogue and in use by various organizations are Management Information System (MIS), Knowledge Management System (KMS), Enterprises Resource Planning (ERP), Relational Database Management Systems (RDBMS), Computerized Maintenance Management System (CMMS), and Enterprise Asset Management (EAM). All of these systems are very successful to store the relevant information for the successful implementation of database management systems. All of these platforms can be moulded to suit organizational requirements and are flexible enough to accommodate personalized formats.

In the present scenario across the globe, billions of bytes are added daily by means of various forms of DBMS. In fact the management of Big Data is being talked about the next big thing in the software industry.

2. RELEVANCE OF DATABASE IN MILITARY ENGINEER SERVICES (MES)

MES is the largest construction agency in the country. Varied types of works are being implemented across the country for various service organizations. Each work can be identified by various parameters relevant at various stages. Same data has different importance for pre-administrative planning team, sanctioning authority, post-administrative planning team, contracting agency, ground executives, audit authorities, inspecting authorities etc. If we have an organized data base management system uniformly implemented and updated across all the offices in the country, the data can be retrieved and in turn can save a lot of paper, energy, effort and time.

3. PRESENT STATE OF DATABASE IN MILITARY ENGINEER SERVICES (MES)

As of now, the monitoring of the works is done by means of timely Reports and Returns scattered across monthly, quarterly, half yearly and yearly pattern of submission. Numerous reports are being generated for the physical and financial progress of the works. Monthly MER is generated on 25th of every month to monitor the financial progress of works. MER is produced at Sub Division Officer level i.e. Assistant Garrison Engineer (AGE) at their Sub Division. The same is compiled at Division level in the office of Garrison Engineer (GE). The report gets duly vetted for correctness in the office of unit accountant (UA). The same is then forwarded to District level office i.e. Commander Works Engineers (CWE), which compiles the same as received from various GEs under their command and forward to the Chief Engineer Zone. The report is compiled at Zone as received from various CWEs and then forwarded to Headquarters Chief Engineer Command. The final complied report is then forwarded to Engineer-in-Chief's Branch.

The detailed physical and financial progress is monitored through Quarterly Progress Report (QPR), which follows the same cycle.

The same exercise is regularly repeated for numerous other reports and returns on prescribed intervals. Much of the reports remain unchanged over a long period of time, but still needs to be sent again and again. The exercise is followed for various sections of office viz E1 (which itself comprise of various sub sections), E2, E3, E4 (which generates numerous reports), E5, and E8. If counted, the number of reports would not come less than hundred. The similar exercise is repeated as per periodicity at the cost of tonnes of paper and effort. It is observed that a substantial quantum of quality time of executives and staff goes off in making these repetitive reports thus jeopardising their effort in investing of monitoring of quality execution of works at site. The time saved can be utilized for planning of new works.

Now this database is no way centralized. The reports do have a fixed format but every office takes some aberrations and modify then as per convenience. The higher headquarters have to break their head in compiling the reports arriving from subordinate formations.

In view of the facts elaborated above, it is now pertinent to mention that in this age of Internet accessible at every corner of nation, there is a requirement of centralized reports monitoring system where the data input is responsibility of subordinate formations but compilation and interpretation is software's responsibility. The higher headquarters, in turn, can access and interpret the data on requirement basis.

4. MODUS OPERANDI FOR SOFTWARE BASED REPORT GENERATION AT CENTRAL LEVEL

Various software platforms are available these days through which the database can be standardized, updated and maintained on regular basis and accessed by executives as per their authorization and access granted.

First of all a nodal agency/section is to be created at the Engineer-in-Chief's Branch for the administration of standardized central database management system. The responsibility of this nodal agency is to standardize the fields and formats for the reports. The interested officers and staff in this section need to be called for on voluntary basis from amongst the organization. The absorption can be more than normal posting transfer cycle. The role of executives coming from within the organization should be to give critical as well as every possible input. Some staff needs to be outsourced to induct from expert agency. Responsibility of the staff from the outsourced agency should be to develop state of the art software as per the latest standards in the market, which is suitable for the organizational requirement as well as sustainable and upgradable for future requirements. They will be responsible for regular up gradation of system.

The software can be made accessible to all the subordinate formations through static IP address or via any latest means known to experts of the field. Every subordinate formation will have authorized access to operate certain fields as per their areas of responsibility and purview.

5. OPERATION OF SOFTWARE BY SUBORDINATE FORMATIONS

On the operational front, the limited access will be authorized as per the role of subordinate formations. There could be certain data that can be operated and entered on daily basis, like Payments. Everyday, cashier or authorized person as designated by GE office or even at AGE office level can enter payments made everyday, say after 1600 Hrs. The advantage is that at a click of a button GE can access the payments made in a day work wise and head wise and can have real time status of fund positions in hand. The data can be centrally correlate with the Cash Assignment so that their arises no situation of over payment over and above cash assignment. Payment vis-à-vis allotment for each head can be closely monitored. Even the CWE office can allocate the funds on the software itself, let it vary on weekly basis, but the same can be accessible to AGE/GE on real time basis and they can plan their works, payment and budget accordingly.

Once the data is updated on daily basis, the reports can be generated on the click of a button based on preprogrammed formats of the software. The same can be accessed, compiled and interrelated by higher headquarters as and when required.

The fields can be accessible for a certain time period in the month, i.e. the fields pertaining to MER can be made available after say 20th of every month and GE office can't access the entry fields after 24th of every month. That will be deterrent also to close the monthly payments by this date.

With the culture of NTGS payments, the same can be linked to software through secure gateways and thus all the payment details can be linked and updated on real time basis thus facilitating their immediate access at any later stage. The patterns can be drawn for say a particular contractor as to how well he is progressing the works and claiming payments. Inferences can be drawn in between the sub divisions of a GE office as to which sub division is smoothly utilizing the funds by timely planning and execution of works.

These comparative graphs and inferences are the very basics of any professional software. The departmental executive placed at the E-in-C Branch in this cell will give these inputs to software officials, as to what parameters we generally monitor on regular basis. These executives will serve as interface between department and outsourced firm and they should have served as ground executives for sufficient time so as to understand the In and Out of MES working.

6. BENEFITS OF PROFESSIONAL SOFTWARES

The biggest benefit is that by use of such tools in day to day working makes us 'Moving With The World'. It makes our working more 'Smart' and adds 'Value' to our working.

The advantages starts from the data entry stage itself. If some dedicated person is entering data on regular basis, it's almost Shure that nothing is missing; all the works are being monitored properly. The budget code heads are monitored and utilized optimally. Chances of making wrong code head booking are negligible. Data is available on real time basis. Higher headquarters have access to works monitoring both ways – physical as well as financial. Dependency of files and printed reports every time some feedback is required is reduced.

7. OPERATION OF SOFTWARE FOR HUMAN RESOURCE MANAGEMENT

Other than works, the database management can be used in number of fields and areas affecting us. One such important field is Personnel Data. The software, which is described in trailing paragraphs, can have a separate Human Resources Module.

For any individual, the data entry in the HR Module should begin right from serving of appointment letter. There onwards all the parameters of an employee should be regularly updated. Starting from personal background, education details, graduation and post graduation status, and specialization, if any. There onwards, regular updating of any type of leave accounts, salary details, increment status, penalties, if any can be updated on regular basis.

Benefits of such an employee data are unimaginable. There will be no need to transfer Personal Folder on every transfer. Software can be programmed to publish Part One & Two orders either automatically on availing EL or as per requirement.

CGO Index Card has been updated in recent past almost every year and every time the format is same, then also it is required every year. Question is why? Why in the age of database managements we need the very basic data of an individual every year and still it is not available in some central database inventory, from where it can be retrieved on as-required basis. In fact the entire service book will be available online. One can login by user ID and password assigned. The status of EL and PTOs will be always available. One can see it and bring out the anomalies, if any and get it rectified.

If algorithms are extended for the database already in place, assigning rules of posting policy while planning the same can generate even posting transfers. The software can analyze the past postings profiles of an individual, check any disciplinary & vigilance case pending and accordingly the software can at least suggest the posting proposal taking into account individuals' areas of specialization and suggesting appropriate posting available based on individuals profile.

Such database will have all the details individual can use in its service times like status of Marriage, children, property, bank accounts, salary slips, Form 16s, child care leaves, maternity/paternity leaves, status of claims submitted, LTC availed, child education allowances etc.

The operations of such software need to be done at AGE (I), GE, CWE, CE, CE Commands and E-in-C's branch levels. Here also restricted access to the various headquarters to be given as per their requirements. The authorization and operationalization of Digital Signatures can be made upto Office Superintendent levels and to some critical clerks handling pay, PTOs or service books, etc. Entering data using digital signature automatically fix the accountability of clerk. To safeguard authenticity of data and enhance accountability, one level up officer also needs to certify (online only) the correctness of data.

8. OPERATION OF SOFTWARE FOR INVENTORY MANAGEMENT

Military Engineer Services is spread in every corner of the country. The software needs to have an 'Inventory' feature. The authorized access should be to storekeeper, BSO and SBSO level. They should have responsibility of maintaining and upkeep of inventory records. The access to data can be handy to AGE, GE & CWE for proper planning of utilization and procurement of stores optimally. However, the limited access to the data can be extended even upto JE level.

The inventory database, if perfectly maintained over a period of time, can even generate the Maxima / Minima by assessing the consumption pattern in trailing years.

Another use of inventory will be data of scrap holding. The assessment of scrap holding can trigger the requirement of auctioning process well in advance.

9. OPERATION OF SOFTWARE FOR E/M MATTERS

The reports can be standardized. Most of reports and returns generated are of repeated nature. The new data needs to be updated at JE level and the report can be generated at whatever level required.

Reports pertaining to running of vehicles and consumption of diesel can be helpful in generating trends as to which vehicle is running more or which generator is running uneconomically.

The software can be governed by rules and regulations in vogue and thus can give forewarnings regarding IEM inspections due for a particular installation or a station. Similar data will be handy in knowing when an installation was inspected by AEI or commissioned by SEI and when is the next inspection due.

The extent of database can even be extended upto Electrical/Mechanical assets and infrastructure in the station. This will help in transferring the critical machinery from one location to another in crisis situations as the executives will be completely aware of availability of any spare capacity available with them.

10. OPERATION OF SOFTWARE FOR MATTERS PERTAINING TO ARCHITECTURAL DRAWINGS

The data of drawing made for a new infrastructure be made available online by means of the software. The same can be utilized for reference by another station or can be even utilized for all the practical purposes by another station just to avoid reinventing the wheel. Similarly, design analysis and details can be made available, maybe on demand, so that they can be used for reference. The critical design analysis can be utilized for reference and use by another stations too.

11. OPERATION OF SOFTWARE FOR CONTRACT MATTERS

The contact section plays a critical role in post-administrative planning as well as during execution stage. The monitoring of works and their associate parameters plays a critical role in timely completion of work including payments. All the critical parameters can be configured in the software and updated on real time basis. Software can be configured at higher headquarters level to work out workload returns also. The status of final bills can be easily monitored.

12. DBMS AT MICRO / INDIVIDUAL LEVELS

Till now the concept and importance of data base management systems is dwelled upon. The conceptualization of software at the larger perspective, its importance and its operationalization has been discussed. Such software requires development of infrastructure including dedicated servers and hiring of professionals on regular basis. Ours is a defense organization. The safety, security and secrecy of data are of paramount importance. Software developers have to take sufficient and foolproof measures so that safety, security and secrecy of data are not jeopardized under any circumstances. The development of such large-scale software is a time intensive process too. But these systems are the future; early we accept and adopt them, its better. Tomorrow, there is no way ahead without such systems in hand.

Now the development of database at individual level will be explored. The development of database at micro level operated by an individual can also make a remarkable difference in the working. These tools help make the working 'Smart' and add 'Value' to the job. The executives utilizing the power of information technology definitely stands out.

13. TOOLS AVAILABLE FOR MICRO / INDIVIDUAL DATABASE

(A). GROUND EXECUTIVES

The most conventional tool available for the basic database management is Microsoft Office EXCEL. Excel is simple to use. Any executive at the very basic level can fruitfully utilize the power of MS Excel to the best. Organizing, Interpretation and

Retrieval/Searching of data is simple. In fact the basic reports like MER and QPR are generally being made in Excel. The same can be utilized to modify or expand the data to suit the requirements.

Taking the example of an AGE. The AGE needs to monitor the progress of work, both physical and financial at Sub Division level. Monitoring of Minor Works is important, as the same needs to be completed by the end of financial year. A simple Excel sheet can work wonders. Suppose a Split AC is sanctioned. In earlier days Split AC needs to be ordered on DGS&D, Voltage stabilizer on Supply Order and the fixing / installation needs to be executed under job work order or as a part of some contract.

Hence, we notice that a simple work of say forty five thousand rupees requires coordination between three agencies to take final shape. The irony is, such a small work needs orchestrated precision for execution and still it needs to be completed well within administrative approval limits and stringent deadline. The Excel database is produced.

| MW No. | AUTHORITY | DESCRIPTION | AMOUNT | 1.1A/A | EXPENDITURE | | | | | | | | |
|--------|--------------------|--|--------|--------|-------------|---|--------------|----------|-------|-------|-------|--------|-----------------|
| | | | | | A | D | LP Volt Stab | LP DGS&D | LP SO | JWO | CA | TOTAL | Total - 1.07xAA |
| 1 | Jodh/MW/01/2008-09 | Prvsn of 01 x AC (Window : 2 Ton) with stabilizer for single bedroom cum treatment room of 769 AD Bde at AA Jdpr | 40000 | 44000 | | | 9337 | | 28607 | 7000 | | 44944 | 2144 |
| 2 | Jodh/MW/02/2008-09 | Prvsn of 01 x AC (Window : 2 Ton) with stabilizer for Heat Stroke centre 769 AD Bde. | 40000 | 44000 | | | 9337 | | 28607 | 6400 | | 44344 | 1544 |
| 4 | 04/MIN WK/2003-09 | 18 Desert Coolers for OR living lines 1 Med Regt | 84000 | 92400 | | | | | | | 33117 | 83117 | -6763 |
| 5 | 05/MIN WK/2003-09 | Prvsn of two 2 TR Split type AC for TV room and ladies room of Battle Axe Offrs Mess in AA Jodhpur | 95600 | 105160 | | | 18675 | | 74920 | 17000 | | 110595 | 8303 |
| 7 | 07/MIN WK/2003-09 | Prvsn of 02 x Deep Freezers with stabilizers capacity 300/320 ltrs for two cook houses at HQ 12 Corps Camp in AA Jdpr (Spl Item) | 74200 | 81620 | | | 12487 | | 59382 | | | 71869 | -7525 |
| 8 | 08/MIN WK/2003-09 | Prvsn of 12 x Desert Coolers for OR living lines of 169 Med Regt in AA Jdpr (Spl Item) | 61800 | 67980 | | | | | | | 55411 | 55411 | -10715 |
| 9 | 09/MIN WK/2003-09 | Prvsn of 16 desert coolers in bldg No. P-129 per line of 312 Field Hospital in Army Area Jodhpur (Spl Item of Work). (GE MH) | 95300 | 104830 | | | | | | | 84348 | 84348 | -17623 |
| 10 | Jodh/MW/10/2008-09 | Prvsn of 5 x Refrigerators (4 x 225 Ltrs and 01 x 250 Ltr capacity) for JCCs Mess, Offrs Mess & Cook Houses of 137 Med Regt. | 93770 | 103147 | | | 19687 | 71349 | | | | 91036 | -9297.9 |
| 14 | Jodh/MW/14/2008-09 | Prvsn of 02 x Water Coolers (40 Ltrs) for OR cook house and workshop area of 188 Fd Wksp EME in AA Jdpr. | 62500 | 68750 | | | 12487 | 51075 | | | | 63562 | -3313 |
| 18 | JODH/MW/18/2008-09 | Prvsn of Two Water Coolers for Bldg No. F-9 of 137 Med Regt in AA Jdpr | 65000 | 71500 | | | 18972 | 51075 | | | | 70047 | 497 |
| 19 | JODH/MW/19/2008-09 | Prvsn of Nine Desert Coolers for Bldg No. P-9 of 137 Med Regt in AA Jdpr | 46350 | 50985 | | | | | | | 38961 | 38961 | -10633.5 |
| 20 | JODH/MW/20/2008-09 | Prvsn of one Deep Freezer and one refrigerator of capacity 310 Ltr with stabilizer for 188 Fd Wksp in AA Jdpr | 59750 | 65725 | | | 18972 | 18271 | 29691 | | | 66934 | 3001.5 |
| 36 | | 3 Water Cooler (40 Ltr) 125 SATA Regt. | 93400 | 102740 | | | 28458 | 76613 | | | | 105071 | 5133 |
| 37 | | 3 Refrigerator (310 Ltr) 512 ASC Btin | 64900 | 71390 | | | 24631 | 45112 | | | | 69743 | 300 |
| 39 | Jodh/MW/39/2008-09 | 3 Water Cooler & Volt Stab 14 GUARDS & BDE HRDC | 94110 | 103521 | | | 28458 | 76613 | | | | 105071 | 4373.3 |
| 46 | | Prvsn of 01 x Refrigerator for MI Room of 199 Med Regt in AA Jdpr. | 13300 | 14630 | | | 3937 | 7848 | | | | 11785 | -2446 |

As it is observed for works at S No.1 & 2, the work could be completed with two local purchases and one job work order, still the work got completed well under limits of administrative approval. Works at S No.20 could be completed with three local purchases.

Here it is clearly established that use of MS Excel helps in effective monitoring of works and the chances of error of missing out of any work or wrong bookings is reduced to almost nil.

The same database can be accessed through Microsoft Office ACCESS. The interface of MS Access is better. Data is presented in user-friendlier format i.e. Forms. The accessibility and inference of data is more 'Smart'. Forms can be tailor made as per personal preferences. When database increases, its advisable to manage data in MS Access rather Excel. The searching options are better; Forms can be linked to Query, thus facilitating data retrieval easy. The reports can be generated and prints can be taken. While handing over the charge, what can be a better way to do so than handing over the print out of reports updated till the very last working hours. That qualifies to be called as 'Smart' way of working.

Another advantage is that the same Excel sheet can be accessed on any smart phone compatible with MS office. So while on run also, the executives are completely in control over their works and ready to answer any call anywhere.

Personalized databases are need based. From Garrison Engineer's perspective a database is produced:

WORKS 2012-13-14 Search

Master Form Contract Payment Master Form 1

Head: MW AA Year: 2013-14 AA No: 2 Code Head: Minor Works : 92/652/00

Unit: Signal School Fmn: GE Nodal GE: GE (NS) Sub Divn (A): 2 Sub Divn (B): Done

Adm App: HQ SNC/02/2013-14/MW Work SI No: WK/0763-A dt: 10 May 13 A/A Amount: 0.994 Contingency: 2,895

Name of Work: Provision of Split Acs in server-Net working room of Puzhamukham hal Naval Base, Kochi

JD/DT/AMT/FIRM: 3045/2013-14/01/E3 dtd. 14-Nov-'13 TS: 2210/Ved/E2 dt 29 Jun '13 Rs 99,923/- TS Contingency:

EB File: 8808 DIT: DRT: JE (A): Rajeev JE (B):

CA No: 92 CA Year: 2013-14 CA Amt: 1039380.00 Contractor: M/s KA Antony & Sons

Commencement: 09-Dec-2013 Completion: 14-Jun-2014 Extended Compl: Actual Compl: Remarks: 3045/2013-14/01/E3 dtd 14-Nov-13

Form Field Text Box Image Box Objects Themes Labels Shading Text Size Align Edges Form Unlocked

Record 149 of 222

The key to effective database management systems is to keep it always open on the desktop. It's not necessary that all the fields for all the works will be completed. Some data may not be relevant for some works, so can be safely left blank. The design of form needs to be elaborate and taking into account every possible field which maybe required for even a single work.

In the first phase, as the copy of administrative approval is received, referring to database above, all the fields till the Name of Work can be filled. In second phase, the TS fields can be filled. In the third phase, the contract fields can be completed.

One of the major advantages of maintaining a database is that it facilitates clubbing of the works effectively. The examples quoted here refer to periods when financial power of GE to accept contract was 15 lakhs and total number of contracts that can be concluded was 75. However, total works of various categories in hand are around 130. So challenge is to club these works in such a manner that all works get included and clubbed to fulfill all the prescribed criteria, this taking into consideration to keep sufficient room for regular maintenance contracts, with which sanctioned works can't be clubbed.

This is a classic case where six works (Minor & Spl Repairs) are clubbed to conclude a contract. It can be seen that the monitoring of each work with reference to numerous parameters can be so effectively done with the help of DBMS.

WORKS 2012-13-14

Master Form 1

Head: MW | AA Year: 2013-14 | AA No: 1 | Code Head: Minor Works : 92/652/00

Unit: INS Garuda | Firm: GE | Header GE: GE (NS) | Sub Divn (A): 1 | Sub Divn (B): | Done:

Adm App: HQSNC01/2013-14/MW | Work SI No: WK2543/GAR dt 02 Jul 13 Rs 80,350/- | A/A Amount: 0.827 | Contingency: 2,409

Name of Work: Provision of 1000 Ltr water tank with staging and connected water supply works at MT section INS Garuda

JO/DT/AMT/FIRM | TS: 2210/Gar/E2 dt 02 Jul 13 Rs 80,350/- | TS Contingency:

ES File: 8763 | D/T: | D/T: 07-Aug-2013 | JE (A): Sethuraman | JE (B):

CA No: 57 | CA Year: 2013-14 | CA Amt: 14.49 | Contractor: M/s Sree Narayana Enterprises

Commenced: 03-Sep-2013 | Completion: 02-Mar-2014 | Extended Comp: | Actual Comp: | Remarks:

WORKS 2012-13-14

Master Form 1

Head: MW | AA Year: 2013-14 | AA No: 14 | Code Head: Minor Works : 92/652/00

Unit: INS Vthry | Firm: GE | Header GE: GE (NS) | Sub Divn (A): 1 | Sub Divn (B): | Done:

Adm App: HQSNC14/2013-14/MW | Work SI No: WK2002 dt 03 Jun 13 | A/A Amount: 0.960 | Contingency: 2,796

Name of Work: Provision of 5000 Ltr storage of water tank and connected water supply works at NPG Gally, INS Vindurthy, Naval Base, Kochi

JO/DT/AMT/FIRM | TS: 2210/Ved/E2 dt 03 Jul 13 Rs 96450/- | TS Contingency:

ES File: 8763 | D/T: | D/T: 07-Aug-2013 | JE (A): Sethuraman | JE (B):

CA No: 57 | CA Year: 2013-14 | CA Amt: 14.49 | Contractor: M/s Sree Narayana Enterprises

Commenced: 03-Sep-2013 | Completion: 02-Mar-2014 | Extended Comp: | Actual Comp: | Remarks:

WORKS 2012-13-14

Master Form 1

Head: MW | AA Year: 2013-14 | AA No: 15 | Code Head: Minor Works : 92/652/00

Unit: NDRA | Firm: GE | Header GE: GE (NS) | Sub Divn (A): 1 | Sub Divn (B): | Done:

Adm App: HQSNC15/2013-14/MW | Work SI No: WK0809 dt 13 Jun 13 | A/A Amount: 0.872 | Contingency: 2,831

Name of Work: Provision of additional storage water tank with pumping arrangement for Bldg P-66 Katarbagh, Kochi

JO/DT/AMT/FIRM | TS: 2210/Ved/E2 dt 03 Jul 13 Rs 95,650/- | TS Contingency:

ES File: 8763 | D/T: | D/T: 07-Aug-2013 | JE (A): Sethuraman | JE (B):

CA No: 57 | CA Year: 2013-14 | CA Amt: 14.49 | Contractor: M/s Sree Narayana Enterprises

Commenced: 03-Sep-2013 | Completion: 02-Mar-2014 | Extended Comp: | Actual Comp: | Remarks:

WORKS 2012-13-14

Master Form 1

Head: MW | AA Year: 2013-14 | AA No: 19 | Code Head: Minor Works : 92/652/00

Unit: INS Vthry | Firm: GE | Header GE: GE (NS) | Sub Divn (A): 1 | Sub Divn (B): | Done:

Adm App: HQSNC19/2013-14/Minor Works | Work SI No: WK2001 dt 04 Jul 13 | A/A Amount: 0.586 | Contingency: 1,707

Name of Work: Provision of fresh water Tank with Motor at MI Room, INS Vindurthy, Naval Base, Kochi

JO/DT/AMT/FIRM | TS: 2210/VED/E2 DTD 15-AUG-13, Rs 60,000 | TS Contingency:

ES File: 8763 | D/T: | D/T: 07-Aug-2013 | JE (A): Sethuraman | JE (B):

CA No: 57 | CA Year: 2013-14 | CA Amt: 14.49 | Contractor: M/s Sree Narayana Enterprises

Commenced: 03-Sep-2013 | Completion: 02-Mar-2014 | Extended Comp: | Actual Comp: | Remarks:

WORKS 2012-13-14

Master Form 1

Head: MW | AA Year: 2013-14 | AA No: 8 | Code Head: Minor Works : 92/652/00

Unit: INS Vthry | Firm: GE | Header GE: GE (NS) | Sub Divn (A): 1 | Sub Divn (B): | Done:

Adm App: HQ SNG06/2013-14/MW | Work SI No: WK2002 (3) dt 23 May 13 | A/A Amount: 0.754 | Contingency: 2,196

Name of Work: Provision of 1000 Ltr water tank with staging connected water supply works at Bldg No P-152, Naval Base, Kochi

JO/DT/AMT/FIRM | TS: 2210/Ved/E2 dt 29 Jun 13 Rs 74,370/- | TS Contingency:

ES File: 8763 | D/T: | D/T: 07-Aug-2013 | JE (A): Sethuraman | JE (B):

CA No: 57 | CA Year: 2013-14 | CA Amt: 14.49 | Contractor: M/s Sree Narayana Enterprises

Commenced: 03-Sep-2013 | Completion: 02-Mar-2014 | Extended Comp: | Actual Comp: | Remarks:

WORKS 2012-13-14

Master Form 1

Head: SR E/M | AA Year: 2012-13 | AA No: 20 | Code Head: Special Repair E/M C/O : 92/658/06

Unit: GE (NS) | Firm: GE | Header GE: GE (NS) | Sub Divn (A): 1 | Sub Divn (B): | Done:

Adm App: HQSNC20/12 13/Spl Repairs E/M | Work SI No: WK8008/Maj dt 11 Mar 13 | A/A Amount: 0.947 | Contingency: 28,072

Name of Work: Special Repairs & Improvement of Existing Chlorination System at Various Pump Houses at KB and Naval Base Kochi

JO/DT/AMT/FIRM | TS: 2270 /E2 dt 20-May-13 Rs.990483 | TS Contingency: Rs.25,000 dtd.10-July-13

ES File: 8763 | D/T: 16-Jul-2013 | D/T: 07-Aug-2013 | JE (A): Sethuraman | JE (B):

CA No: 57 | CA Year: 2013-14 | CA Amt: 14.49 | Contractor: M/s Sree Narayana Enterprises

Commenced: 03-Sep-2013 | Completion: 02-Mar-2014 | Extended Comp: | Actual Comp: | Remarks:

14. TOOLS AVAILABLE FOR MICRO / INDIVIDUAL DATABASE

(B). STAFF OFFICERS

Not only ground executives can utilize the power of DBMS; the same can also be utilized by staff officers for coordination of work between various agencies within the headquarters.

Taking the example of E2 Planning section of chief engineer office. It's a nodal section functioning as pivot and coordinating between various other sections of chief office.

The following forms depict the parameters that E2 Planning section needs to keep track of a particular work.

E2 Planning

Database WOO, Delegations & TS AE Part -1 Correspondances Code Head E8 Para 35 AMWP 14-15 AMWP E/M Schedules

Date Created: 21-Feb-2014 8:33 pm AMWP YR: 13-14 SANCTION FY: 2013-14 CFA: CAC AoC-in-C SPECIFIC TYPE: PARA 35 FMN: CE

NAME OF WORK: PROVN OF CONTROLLED ENVIRONMENT FOR STORAGE OF WARHEADS AT WSA BKT

A/A No.: Go Ahead A/A Date: 18-Dec-2013 PDC (M/W): 52 Weeks PDC: 17-Dec-2014 A/A Amnt: 50.36

Corrigendum Status: Not Reqd Corrigendum Amnt: Corrigendum Date:

FC Date: FC Amnt: RAA Date: RAA Amnt:

E2 PLG FILE (A): 952462 E2 PLG FILE (B): 285 E2 PLG FILE (C): BKT E2 PLG JE: Nk. B Ramesh E2 PLG CLK: Nk Dangi

CWE: CWE (AF) Bamrauli STATION: Bakshi Ka Talab GE: GE (AF) Bakshi Ka Talab AGE: AGE (B/R)- I UNIT: 8 C&MU Bakshi Ka Talab

REMARKS: Date of Go-Ahead - 26 OCT 2012/18.12.2013 (R)
Go Ahead Sanction issued 26-Oct-2012 cancelled.
Bldg Tender by CWE (DRT-17.01.14)
CAC & 8 C&MU pursued to obtain revised CFEES Clearance
BPs Recd on 19-Mar-14.
Scrutinised DCS recd from E4 on 21-Mar-14
Drwgs recd from E6 on 03-Apr-14

WOO Date: 16-Dec-2013 E4 File: 78 E4 JE E/M: Hav Rakesh

15. SYNCHRONIZATION OF DBMS ACROSS DEVICES

In the era of smartphones, these applications can be downloaded on all three types of platforms viz-personal computer, tablet and smart phone. Once installed, the same database can be synced to any of the devices. Generally, its convenient to work on PC. So after completing the work on PC, the same can be synched on smartphone and can be easily carried along.

16. CONCLUSION

To work is good, but to work 'Smart' is better and to further add 'Value' to the work is still better. Database Management Systems (DBMS) are the future of 'Smart' working. Today it may seems to be luxury in our pattern of working but tomorrow it will be need. Its right time we adopt the new age software to manage our huge data and start moving towards paperless working. There are immense benefits of keeping professionally managed DBMS software to access varied type of data readily available for reference or retrieval as desired. The age of smartphones further facilitates the synchronization of data and can be accessed anywhere. Effective database management systems reduces the effort of searching files and helps on spot feedbacks, thus differentiating run of the mill executive managers with the 'Smart' ones.