TAKING THE GUESSWORK OUT OF PROGRAM MANAGEMENT UTILIZING COTS SOFTWARE

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ABSTRACT

This paper will discuss the tailoring and utilization of Commercial Off-the-Shelf (COTS) software to perform Program Management. The requirements were to provide a COTS approach to Program scheduling and tracking, determining and tracking personnel resource requirements, and to depict program funding status. Specifically, this paper will address the COTS software utilized by the Simulation, Training, and Instrumentation Command (STRICOM) to perform Program Management from the receipt of a draft Operational Requirements Document to system delivery.

Typically Program Managers have not had sufficient automated tools for Program Schedule planning and tracking, personnel resource forecasting and utilization, and funding overview in an easy to use format. The ability to cross-check the deliveries specified in a RFP and Section F of a contract has been labor intensive in the past. This paper will discuss the integration and utilization of Microsoft Project and Excel to accomplish these tasks easily and in a timely manner.

In discussing the utilization of COTS software for Program Management, the paper will address the requirements for the STRICOM system, its capabilities, and the benefits received from its use. The paper will also discuss the system's applicability to other organizations, both government and defense contractor.

Automated program management for all systems, ACAT I to ACAT IV, is required to schedule and track shrinking resources and to conduct real time "what if" drills in order to make intelligent program decisions. The utilization of the STRICOM system is one method of accomplishing these tasks.

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INTRODUCTION

Program Management for acquisition of weapons systems and training devices within DOD is an extremely complex process. By providing tools for front end planning and scheduling of a military acquisition and the capability of tracking the completion of scheduled events, after contract award, the job of the Program Manager is made somewhat easier. Utilizing Commercial Off-the-Shelf (COTS) software as the basis for these tools reduces development time, risk, and cost normally associated with the development of a specialized software program. Two of the tools provided to the U.S. Army Simulation, Training, and Instrumentation Command (STRICOM), which utilize COTS software as their basis will be discussed. The tools are the Close Combat Tactical Trainer (CCTT) Project Management and Tracking Tool and the New Work Brief/Project Acceptance Committee (NWB/PAC) Tool. Requirements for these tools were developed by STRICOM, based upon earlier findings that defined their Local Area Network (LAN) and Management Information System (MIS).

THE REQUIREMENTS

CCTT Project Management Tool

The requirement for this tool stated that it would be a PC-based management software tool that would operate within the MS-DOS 5.0 operating system and in a Microsoft Windows environment. This COTS software based tool was to run on IBM PC/AT compatible 386/33 MHz machines and IBM PC/AT compatible Intel-386 based Compaq notebook computers. The tool would include defining, tracking, and maintaining project schedule data, Action Item Tracking, and Project Schedule Change Tracking.

The requirement also stated that the government would provide the hardware and the following COTS software: MS-DOS 5.0, Microsoft (MS) Windows, MS Excel, and Word Perfect for Windows. The contractor was to obtain and provide the following COTS software: Harvard Graphics for Windows, the latest version of PC Plus, MS Project for Windows, and other PC-based COTS software required to accomplish the effort (i.e., dBase III+, Dbase IV, or Paradox).

Utilizing the above, the effort required Schedule Creation and Schedule Maintenance for the CCTT Program. Schedule Creation consisted of an independent evaluation of the CCTT Request for Proposal (RFP) to identify deliveries, meetings, conferences, test activities, and key milestones up to and including the Milestone III decision. It also required the review of the DOD 5000 Series of instructions and directives to identify the activities, events and milestones necessary to obtain a Milestone III decision for an ASARC program. The data from both the RFP and DOD 5000 Series was to be input into MS Project to establish an initial CCTT Project Schedule. Schedule Maintenance required working with the CCTT project team to gather detailed schedule data, i.e., completion of events/tasks, to maintain a current CCTT Project Schedule. Schedule Maintenance also included updating views, scheduled start and end dates, float time, interdependency and recording actual start and finish dates and the percentage of completion of each task in the schedule.

NWB/PAC Tool

The NWB and PAC procedures were to be utilized to enhance the visibility of any new initiative likely to require the expenditure of resources, either funding or manpower and to authorize the commitment and assignment of STRICOM resources in support of new work efforts. The requirement for this tool stated that it would be a PC-based system that would operate in the same software and hardware environment described in the requirements for the CCTT Project Management Tool above. This tool was to be maintained on the STRICOM LAN and be accessible from any PC on the LAN. There were five main requirements that had to be met with this tool. First, was a requirement to provide a standard format for the STRICOM New Work and PAC briefings. This entailed providing the users a data entry interface that allowed

for the fast and simple creation of briefing material in a standard format, and providing the user with a professional looking presentation (slide show). Second was the requirement to provide a set of generic project templates from which a project director and his matrix team could build their own schedule. The generic templates were to start with the draft Operational Requirements Document (ORD) and end with system delivery. Third was a requirement to provide a method to assign man-hour requirements, by labor discipline (e.g., Project Engineer, Software Engineer, Logistics Specialist, etc.) to a scheduled task. The fourth requirement was to provide a five year project funding summary based upon the types of funding for the project and whether the amounts were funded or unfunded. The last requirement was to provide a comprehensive on-line help facility for all portions of the tool.

SELECTION AND INTEGRATION OF COTS SOFTWARE

CCTT Project Management Tool

Part of the selection of software for this tool was directed by the user, that being MS Project for Windows. This COTS software provided the ability to create the schedule for the CCTT Project, for instance: Contract Data Requirements List (CDRL) items delivery, Program Reviews and Conferences and their minutes, Program major events (i.e., SSR, PDR, CDR, PCA, etc.), and events required by the DOD 5000 Series instructions. MS Project also provides the ability to track a schedule once it is created and can provide the variance from planned start and finish to actual start and finish. Therefore, this COTS software provided the ability to meet all of the requirements except for Action Item Tracking and Schedule Change Tracking.

To meet these requirements, Superbase 4 was selected because, at the time, it was the best database program with an MS Windows interface. To accomplish the Action Items Tracking, an Action Item Form was created using Superbase 4. A Macro was developed in MS Project that provides access to the Action Item Form. A button to represent the Macro, was placed on the MS Project Tool Bar for ease of operation. The Action Item Form allows recording of an Action Item, the person who created it, a suspense date, the organization and person responsible for resolution, and when the action was completed. For the purpose of Schedule Change Tracking a Change Comment Form was created in Superbase 4, and utilizing its Dynamic Data Exchange (DDE) capability an interface with MS Project was established. The Change Comment Form can be tied to any task in MS Project and a button for it was also added to the Tool Bar, with an associated Macro. This provided the capability to record when the schedule was altered, by whom, and why. These simple actions fulfilled the software requirements for the CCTT Project Management Tool.

NWB/PAC Tool

The selection of software for this tool had the goal of quickly developing an easy to use application with a comprehensive help facility. To achieve this goal, the development team used available COTS software packages to their fullest extent. The packages selected were MS Project and Excel for Windows, since these applications were already in use at STRICOM. MS Project was selected for its scheduling capability. Its resources capability was not used because of its limitations and difficulty of use. Excel was selected for handling resources, funding and costing information and its graphics presentation capabilities. To meet the diverse requirement for this tool, the main portion of the application was coded using C++ and the Microsoft Foundation Classes (MFC) as the base development tool. The base development tool was designed and developed to control the flow of information, both within Excel and Project, and from Project to Excel.

NWB Tool - A set of eight screens were developed, utilizing C++, to standardize the New Work briefing. The screens used for creating a NWB (Figure 1) were titled as follows: Cover/Title Slide, Description, Milestone, Source of Requirement, Funding, Funding Remarks, Issues or Open Actions, and Other Information. Each of these screens contain character entry boxes and/or pull down menu selections for inputting information. Each screen was provided with the capability to move to the next or previous slide, to cancel creation of the brief at any point, and to display on-line help. The ability to edit the screens was also provided. After all data is entered and edited on the screens, the capability to run a slide show, or print a copy of the presentation, was provided. The slide show is generated from the input screens using the MS Excel slide show add-in.

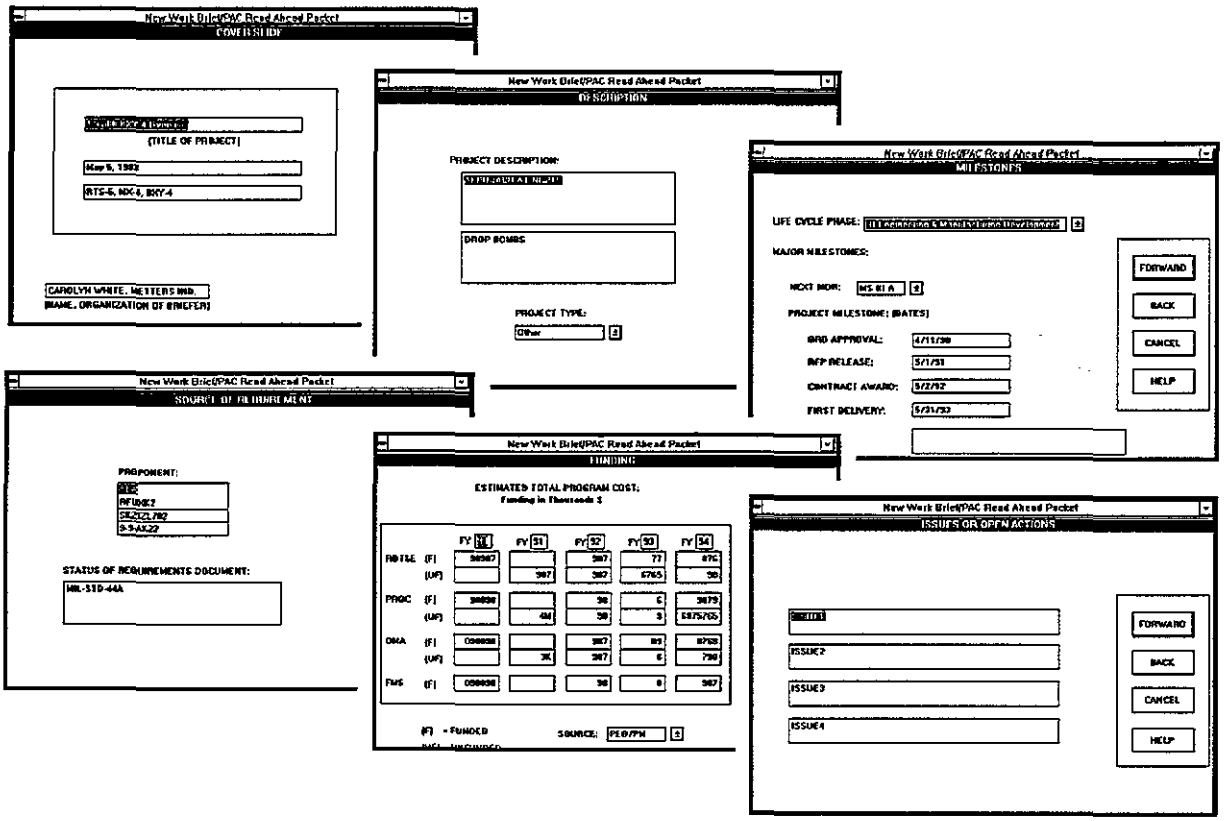

FIGURE 1. NEW WORK INPUT SCREENS

PAC Tool – A set of eight slides were developed utilizing C++, MS Project and MS Excel, to standardize the PAC briefing. The slides used for presenting a PAC briefing were titled as follows: Cover/Title Slide, Description Slide, Major Milestone Chart, Funding Summary Slide, Acquisition Summary Slide, Manpower Resource Summary Slide, Impact of New Work Slide, and Issues or Open Actions Slide. The Major Milestone Chart and its supporting Project Schedule were developed using C++ and MS Project. The Manpower Resource Summary Slide, and the Funding Summary Slide were developed using C++ and MS Excel. The remainder of the slides were created in C++ and were designed to operate in the same manner as the NWB Tool.

Project Schedule – The most challenging portion of this tool was the development of a set of generic schedule templates. The templates contain all the tasks required from the receipt of a Draft ORD to System Delivery, including Foreign Military Sales and Reprocurement. To provide maximum flexibility in schedule preparation, it was decided to provide four component areas for the templates, each with their own set of schedules. The four areas were Front End Documentation, Milestone Decision Reviews, Contracting Methodology, and Systems. The logic flow for using the templates is shown in Figure 2. A set of four dialogue boxes containing radio buttons was developed to allow the user to select a choice from each component area to build a generic schedule (see Figure 3). After all the selections are made, each component is assembled into a file in the MS Project MPX format. This format allows for a text file, in a standard comma delimited record format, to be imported to MS Project. The problem then became how to assemble these pieces, and still retain the integrity of the data and the relationships among each of the tasks. This issue was resolved by developing a subclass of the MFC CFile class that would allow a comma delimited text file to be parsed into its components, and reassembled. To maintain the linking of the tasks in each component, the predecessor field of each task had to be extracted, and the task ID number within that field had to be changed based on the task's relative location within the larger project file. The remaining information was reassembled and the task was written to disk. Once the project schedule templates are assembled into one file, the

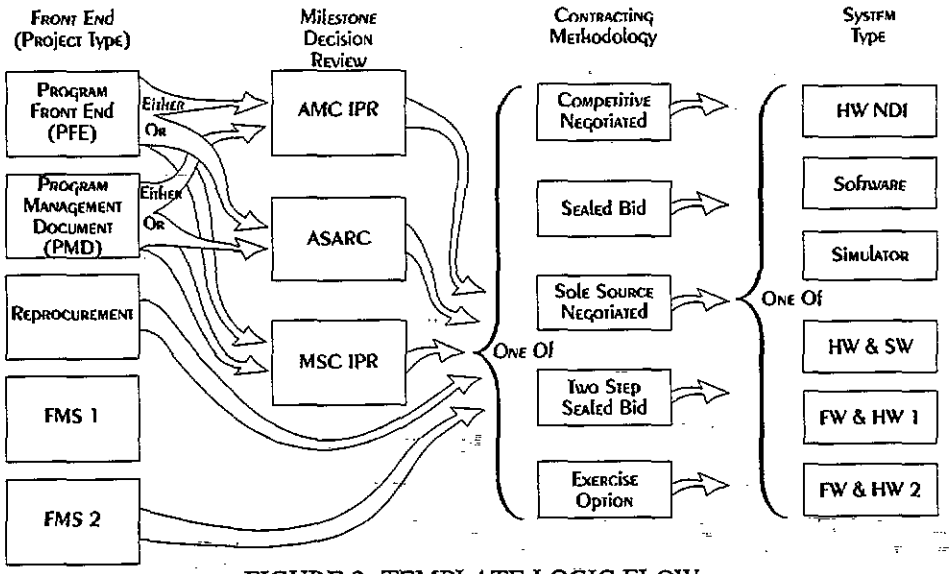

FIGURE 2. TEMPLATE LOGIC FLOW

Project team can then add, delete, or manipulate them in any way within MS Project. A macro with an

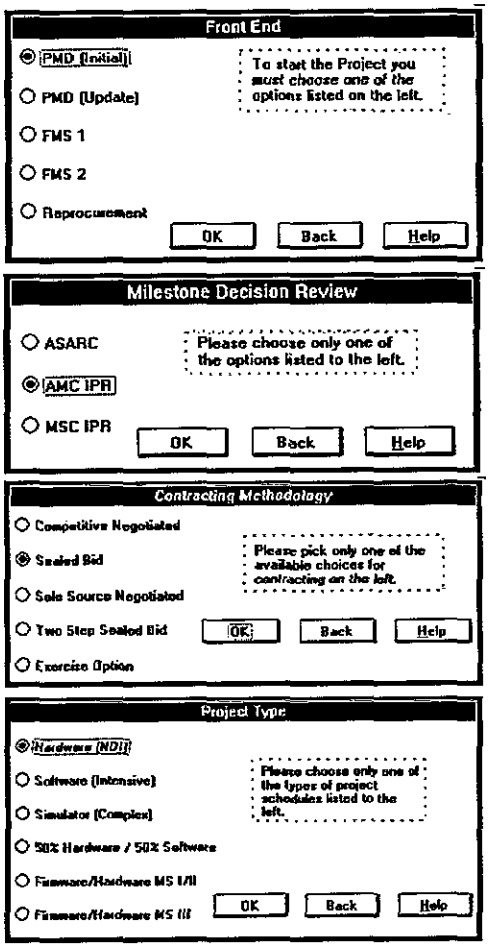

FIGURE 3. DIALOGUE BOXES

associated button on the tool bar are provided so that the file is saved as both a MPP and MPX file.

Resources and Funding – After the project schedule is complete, the task name, and scheduled start and finish dates are extracted from the schedule. This is done using the CParseFile class developed to build the original schedule template. This information is written to a standard file format for MS Excel. An Excel add-in (XLA) and workbook (XLW) file were developed for the project team to incorporate man-hour requirements (by job discipline) and costing against the already developed schedule. To do this, information extracted from the project schedule file is imported into the task sheet where man-hours, by labor discipline, are assigned to each task. This sheet is then used to generate a quarterly man-hour report, and a man-hour cost report. Funding information for the project is entered on the Funding Summary Slide (see Figure 4). Funding information includes the type of funding and whether it is funded or unfunded. Any unused funding types are automatically deleted from the slide.

USING THE TOOLS

CCTT Program Management Tool

Tailoring MS Project – After reviewing the CCTT RFP and DOD 5000 series instructions, a few shortcomings of MS Project had to be taken into account prior to developing the CCTT schedule. First, the CCTT contract contained milestone schedules, conferences/reviews schedules, and some CDRLs with deliveries stated in terms of Months After Contract Award (MAC) or quarterly. MS Project does not recognize months or quarters as a task duration or when linking tasks together; therefore, these items had to be converted into days after contract award and number of days in a given quarter. Secondly, the Standard Calendar in MS Project, which considers week-ends as non-working days, had to be changed to a calendar that considers all days as working days. This was required because the government scheduling was

Project Funding Status ($ in 000's)

	FY94	FY95	FY96	FY97	FY98	FY99	FY00
RDTE							
6.2 Funded	1	2	3	4	5	6	7
6.2 Unfunded	1	2	3	4	5	6	7
6.3 Funded	1	2	3	4	5	6	7
6.3 Unfunded	1	2	3	4	5	6	7
6.4 Funded	1	2	3	4	5	6	7
6.4 Unfunded	1	2	3	4	5	6	7
6.5 Funded	1	2	3	4	5	6	7
6.5 Unfunded	1	2	3	4	5	6	7
OMA							
P2 Funded	1	2	3	4	5	6	7
P2 Unfunded	2	3	4	5	6	7	8
P7 Funded	3	4	5	6	7	8	9
P7 Unfunded	4	5	6	7	8	9	10
P8 Funded	5	6	7	8	9	10	11
P8 Unfunded	6	7	8	9	10	11	12
FMS Funded	3	6	9	12	15	18	21
FMS Unfunded	3	6	9	12	15	18	21
OTHER Funded	2	8	10	16	18	24	26

FIGURE 4. FUNDING STATUS SCREEN

specified in terms of 30, 60, or 90, etc., days prior to, or after an event or delivery, instead of a number of working days. Once these shortcomings were recognized and overcome, the CCTT Schedule was easy to prepare.

Schedule Preparation – The first items added to the schedule were all the major program events reviews and audits as specified in Section F of the contract. These items were linked to Contract Award with the lag time specified in the contract. CDRLs that were required prior to, or after these events were then linked to their events with their specified lead or lag times. CDRLs that were required at a given MAC or other interval, but not tied to a major event, were then added to the schedule, and linked to Contract Award. These items were then placed in the schedule at the appropriate place to maintain a time sequence of tasks from earliest to latest delivery. The linking of tasks within the schedule was accomplished using the Predecessors and Successors function within MS Project. After all items were on the schedule, the schedule was broken down into seven subgroups; Administrative, Software, Hardware, Supportability, Test, Cost, and ASARC. This concluded the preparation of the draft CCTT Schedule. This schedule contained approximately 2200 linked tasks, so that when the Contract Award date was changed, all tasks within the schedule were automatically adjusted to the correct dates.

Customizing the Schedule – After STRICOM reviewed the draft schedule, several additions were requested. The first was to provide notes for tasks to explain delivery requirements or expand on what was required for program reviews, etc. This was accomplished by using the notes function in the Detailed Task Form or Task Entry views within MS Project. Second was to add a column to assign responsibility for each task on the schedule to a project team member. To accomplish this, one of the Text fields contained in MS Project was utilized. Third was the ability to sort CDRLs out of the schedule to provide a list of CDRL deliveries in the same order as listed in the contract. This was accomplished by using a Text field and the sort capability within MS Project. Fourth was to provide the capability to look at the seven subgroups individually. This was done by creating a filter within MS Project for this purpose. Fifth was the capability to view the schedule at various levels of detail. Five levels of detail were created, using the filter capability within MS Project. Level 1 displays only the Major Program Events, while Level 5 includes all tasks,

down to government review of a CDRL. Lastly was the capability to display deliveries within certain time periods, e.g., the next three or six months. Again, this was accomplished by creating a filter for this purpose.

Schedule Within a Schedule – After contract award, STRICOM requested that the contractor's proposed schedule be added to the government's already developed CCTT schedule. To accomplish this task, the contractual dates of the government's schedule were compared to the contractor's proposed dates for all tasks. If the dates for the tasks were the same on both schedules, no action was taken. When reviewing the remaining tasks, it was determined that all of the contractor's due dates for these tasks were earlier than those required by the contract. In order to depict these differences, a methodology was developed. For tasks that had different delivery dates between the government schedule and the contractor's schedule, a duplicate set of tasks was added to the schedule. The government set of tasks were "Marked" (a function within MS Project) and the term "Per Contract" was added to the task name column. These tasks' names were displayed in red print. The contractor's set of tasks was annotated with "Per IDT" in the task name column and a Flag field was added to the schedule. The Flag field, which has a "No" default, was titled "Contractor Schedule." This field was then updated with a "Yes" for those tasks which the contractor proposed to deliver earlier than required by the contract. With these additions and through the use of filters, the CCTT schedule could be viewed from the following perspectives; Government Schedule (Contractual), Contractor's Schedule (Proposed), or a Combined Government and Contractor Schedule. The later schedule allowed direct comparison to assure that none of the Contractor's proposed deliveries exceeded the delivery date required by the contract. This is the present form of the STRICOM CCTT Schedule.

NWB/PAC Tool

The NWB/PAC Tool was designed to be an easy to use tool that standardized the presentations for New Work and Project Acceptance Committee briefings. There are two separate applications within the tool, one for New Work Brief and the other for Project Acceptance Committee.

NWB – A New Work Briefing describes the requirement or nature of the new work, the source of the new work, the source and status of funding and documentation, and any significant issues. The briefing is approximately a five minute overview of a new project to determine; that the work is within STRICOM's charter, that there is sufficient information to proceed to a PAC for assessment of required resources and prioritization, the appropriate account number for man-hour and cost accounting, the STRICOM lead element responsible for the PAC briefing, the composition of the PAC Team to assist the lead element in preparing for the PAC, and the membership and proposed date for the PAC.

Creating and Editing a NWB – To create a NWB, the user selects "Create New Work Brief" from the NWB/PAC Tool's menu. The screens (Figure 1) are presented one at a time for entering the briefing information. During the creation process, the user can move between slides to make changes by utilizing the FORWARD or BACK buttons on each slide. Editing an existing New Work briefing is accomplished by selecting "Edit New Work Brief" from the Tool's menu. The screens are edited in the same manner described above for creating the briefing.

Slide Show – The capability to run a New Work Slide Show from a PC is provided by selecting "Run Slide Show" from the NWB menu. In addition, a hard copy or the slides can be printed by selecting "Print NWB" from the Tool's menu.

Acceptance – The user has found this to be an easy to use and effective tool. It has effectively standardized the presentation of all new work briefings within the organization.

PAC – The purpose of the Project Acceptance Committee briefing is to determine that the requirement is sufficiently defined and understood to warrant undertaking a significant expenditure of resources, that the draft project schedule, acquisition strategy, and estimate of required resources are realistic and executable, and what, if any, issues are associated with the project or the allocation of resources. A PAC briefing for a new project includes a description of the requirement, a milestone chart with the major project events, a summary of the funding status, a synopsis of the acquisition strategy, a detailed project schedule, a projected manpower resource summary, an estimate of the impact of the new work on the existing workload, and a summary of any issues that could impact the new work. The PAC members determine that the new work is viable and sufficiently defined and resourced with no

major issues requiring resolution. The PAC will approve/assign a priority rating to the project, approve the Project Schedule as the baseline for further work, concur with the proposed acquisition strategy, designate the lead organization for the project, and approve the formation of a Project Team and the expenditure of resources, either from within the organization or through a Support Services Contractor.

Creating and Editing the Schedule – Creation of the PAC briefing is a multi-step operation. The first step is to create the project schedule. This is done by selecting "Create PAC Schedule" from the tool's pull-down menu. A series of dialogue boxes will then be displayed (See Figure 3), each containing a series of radio buttons. The user selects one radio button, that most closely matches the project strategy, from each box. Each dialogue box has a Help button that defines the selections available and gives a listing of tasks associated with each selection. Once all choices are made, a generic project schedule is produced, which is automatically loaded into MS Project. Using the functions of Project, the user can modify the generic schedule to meet his needs. This schedule can be edited at anytime by using the "Edit PAC Schedule" menu selection.

Alternate Schedule Creation – The user can create a project schedule in MS Project directly, instead of using the dialogue boxes, and still take advantage of this tool. The schedule can be opened using the "Edit PAC Schedule" menu item. This ensures that the appropriate MS Project view file is opened with MS Project. The file can then be saved, following the appropriate file naming convention, using the save button on the toolbar. From this point, use of the tool is the same regardless of the schedule creation method used. This provides the flexibility to begin using the tool at any point of a project's life cycle.

Creating and Editing Travel Information – While working with the project schedule in MS Project, travel cost information can be entered. This is the second step of the PAC briefing creation process. This feature allows the user to enter travel costs against any task. Three buttons have been added to the MS Project Tool Bar for this function. The first button changes the Project View so that a travel cost column is displayed next to the task name, duration, and scheduled start and finish dates. This allows entering travel cost for any task desired. The second button will display all tasks that contain a travel cost entry. The third button is for printing a travel report. The report contains all tasks, with their start and finish dates, that have a travel cost entry, plus the total cost of travel for the project. Editing the information in the travel column is done through MS Project.

Creating and Editing Resource and Funding Information – Before creating the manpower resources for a project schedule, the project schedule must be fully developed and saved in MS Project. After this is done, selecting "Create Funding and Resources" from the Tool's menu will open an MS Excel application for entering the following information: Man-hours by job discipline against each project task, and funding by funding type for the project. This is the third and fourth step in the creation of a PAC briefing. The input screen for entering funding information is shown in Figure 4 and the input screen for manpower information is shown in Figure 5. From this application two reports can be generated, after the required information has been entered. These are: a Quarterly Man-Hour Utilization Report, and a Man-Hour Cost Report by Discipline. (Note: To accomplish the man-hour loading and costing for man-hours, two tables have been pre-loaded into the tool that are transparent to the user. One is the job disciplines for STRICOM, a generic Support Services Contractor, and some outside agencies, e.g., CECOM and TECOM. The other is the average cost per hour for a government employee and for a support contractor.) To edit the PAC resources or funding data, select "Edit PAC Funding and Resources" from the Tool's menu.

Creating and Editing Other PAC Slides – The final step in creating the PAC briefing is to generate the remaining slides required for the PAC brief. To create these slides select "Create PAC Slides" from the Tool's menu. The titles for these additional slides are: Cover Slide, Acquisition Strategy, and Issues or Open Actions. Entering information on these slides is accomplished in the same manner as for NWB. To edit these slides select "Edit PAC Slides" from the Tool's menu.

Slide Show – The capability to run a PAC Slide Show from a PC, is provided by selecting "Run PAC Slide Show" from the Tool's menu.

Data Transfer – After the PAC brief has been presented and the project approved, the Project Schedule and Project Resources become the baseline for the program. The capability to upload the Project Schedule and Project Resources to the STRICOM MIS has been provided

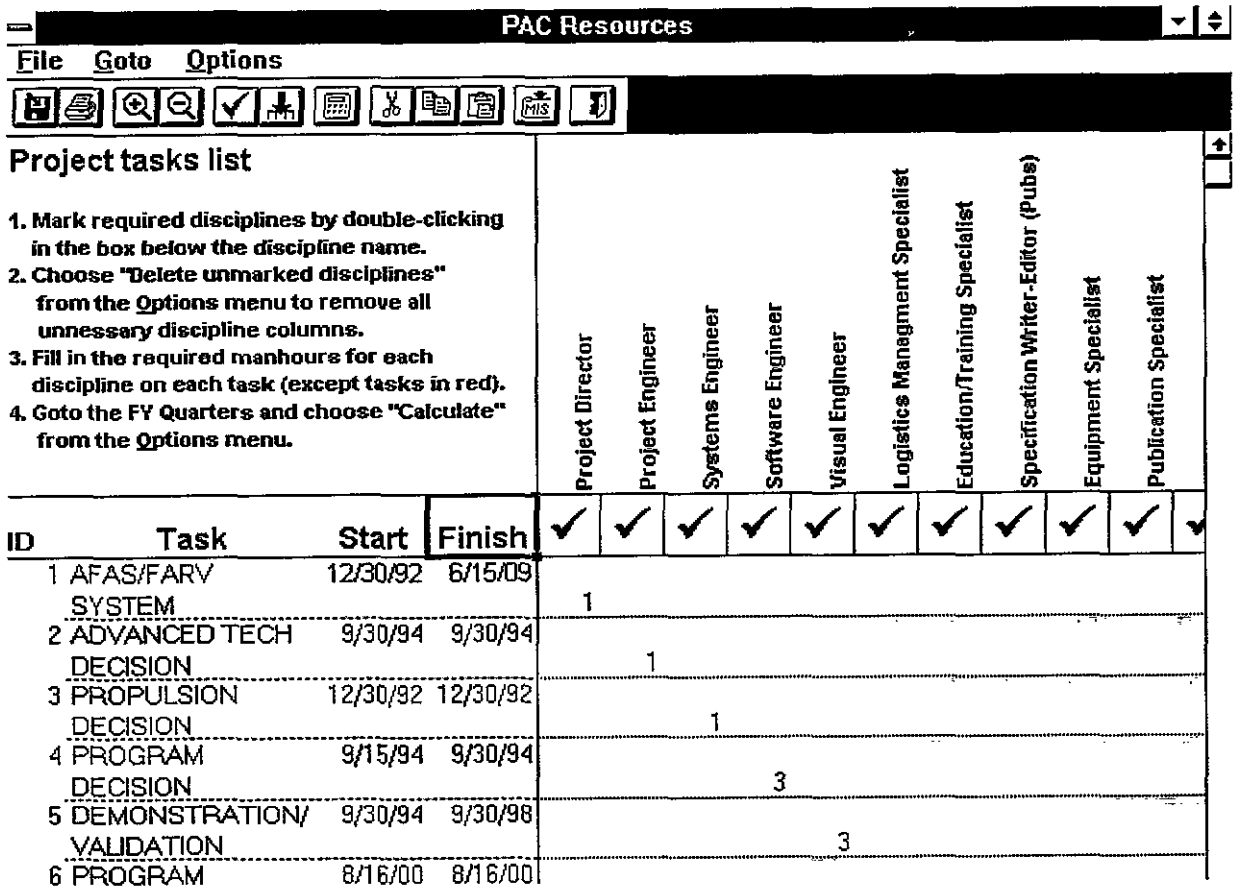

FIGURE 5. MAN-HOUR INPUT SCREEN

through the use of the "Transfer to MIS" selection from the Tool's menu.

Acceptance – The user has found this tool more difficult to use than the NWB. This has been true in two areas; creating the project schedule, and assigning resources, man-hours by job discipline, to each task on the schedule. Although the assignment of resources is a time consuming effort the benefits derived by management and the user's customers have been apparent. This will be discussed in the next section. The PAC Tool has met its goal of standardizing the briefing presentations of all new projects within STRICOM.

BENEFITS DERIVED FROM TOOL USAGE

CCTT Program Management Tool

While using this tool, numerous benefits were realized. One benefit was the ability to discern discrepancies within the RFP prior to Contract Award. When Section F of the contract, the SOW and the CDRLs were evaluated and put on the schedule, scheduling discrepancies were readily apparent. These discrepancies involved CDRL due dates versus Section F events, duration of events in the SOW versus Section F events, and CDRL review dates that went past the Program Review they were supporting. This provided the government the ability to correct the RFP prior to contract award, which greatly reduced the number of contract modifications or change proposals that would have been necessary if the discrepancies had not been discovered prior to contract award. Another benefit was the ability to add option packages to the schedule, that were linked to the date of exercising the option. By changing the start date of the option, "what if" drills could be accomplished to determine the best date to exercise the option. Another benefit, similar to the exercise of option benefit, was the ability to move major events; e.g., SRR, PPQT, IOTE, and determine the impact on the overall schedule. This could be

accomplished because all events that were applicable to the major event were linked to it, so that, when its date was changed, all of the linked events would change also. The ability to predict "peaks and valleys" in terms of resources required throughout the contract was another benefit realized. A continuing benefit is the ability to track all deliveries and determine, at any time, the status of the contract. This includes the ability to project early, on-time, or late completion based upon the current status of deliveries. The addition of the Change Comment Sheets to the tool has proved invaluable in determining when and why dates were changed and by whom.

NWB/PAC Tool

NWB Tool – The main benefit derived from the NWB was the optimization of the process used for accepting new work into the STRICOM organization.

PAC Tool – Like the CCTT Project Management Tool, the PAC Tool has provided numerous benefits to its users. The overview of a new project, in terms of funding status, man-hour requirements and cost, schedule, and acquisition strategy, has been an immediate benefit derived from using this tool. Besides providing a detailed schedule, this tool has provided the ability to plan the required man-hours by job discipline to accomplish new work coming into the organization. The ability to develop a fact-based cost estimate for other Project Managers and Program Executive Offices for the procurement of training devices has also been provided by this tool. The cost estimate is based upon the number of man-hours derived by the tool, times the cost of each man-hour. Because of the tool's ability to display man-hours required, it can be used to determine whether sufficient in-house personnel exist to accomplish a given function, or whether those functions should be handed-off to a Support Services Contractor. Although the tool has only been in use for three months, it has the capability to be used to justify requirements for additional personnel spaces, or funding levels for a Support Services Contract. These are the major benefits that have been realized in the short time the PAC Tool has been utilized.

APPLICABILITY TO OTHER USERS

CCTT Program Management Tool

The scheduling capability of this tool combined with its filters and sorting, and the addition of Action Item Tracking, and Change Comment Tracking make this a very powerful Project Management Tool. Whether this tool is MS Project or some other COTS software is unimportant, the capability to use software to plan and execute a program is the important fact. This tool, or any other with its capabilities, is applicable to defense contractors, other major subordinate commands, other services, and any organization that procures or manufactures goods and services.

NWB/PAC Tool

This tool has been specifically designed to meet the needs of STRICOM. In its present form it is applicable to any defense procurement agency. Minor modifications would have to be made to the schedule templates, job discipline table, and cost table in order to meet the needs of other procurement agencies, and provide the same capabilities to them as the tool presently provides to STRICOM. With further modifications to the job discipline and cost tables, and additional development in MS Excel to provide the ability to cost materials per task, and apply Overhead, G&A, and Material Handling costs to labor and materials as appropriate, this would be an excellent tool for proposal costing.

SUMMARY

Both the CCTT Program Management Tool and the New Work Brief/Project Acceptance Committee Tool were developed with COTS software as their base. They have both proven to be easy to use and have provided tremendous benefits to STRICOM in the short time they have been in place. These tools have made the job of Program Management a little easier and more effective. The Tools have provided a factual basis for estimating required man-hours and cost for a project. Whether these specific tools are used, or others like them, matters not. The capability they provide is what matters.