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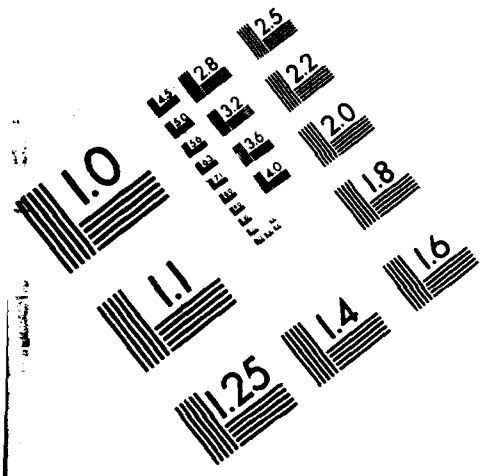

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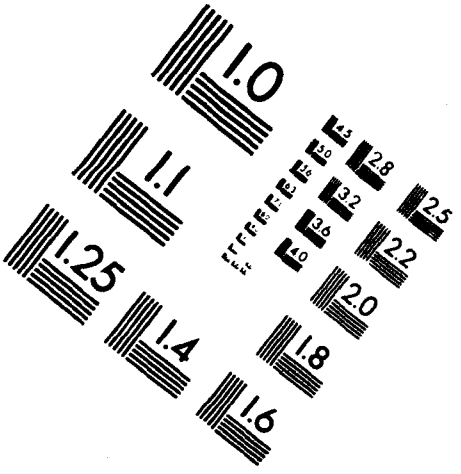

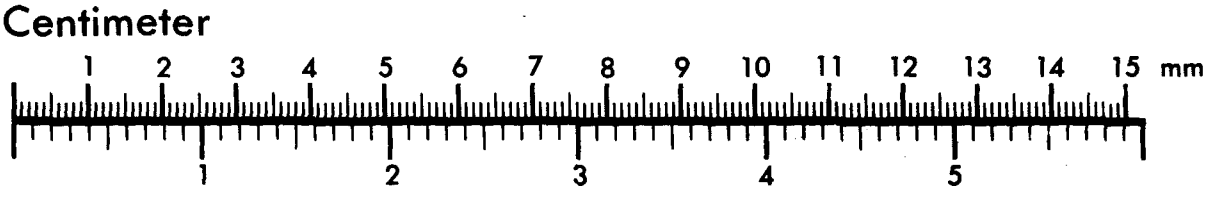

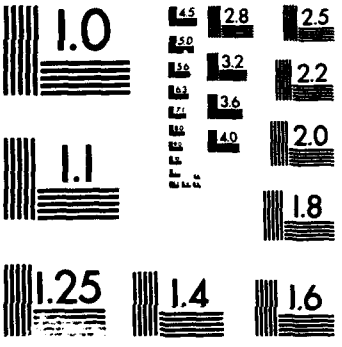

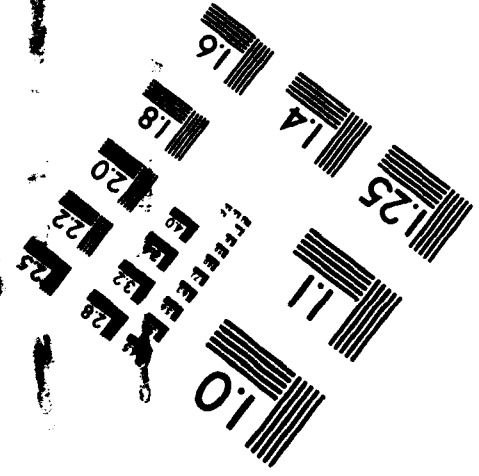

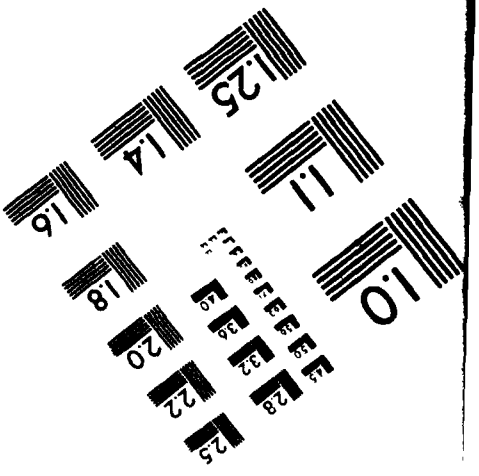

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LESSONS LEARNED WORKING WITH THE ARMY'S MOBILE SUBSCRIBER EQUIPMENT (MSE) PROGRAM

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AN INDUSTRY VIEW

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BERNARD RESNICK

Lessons Learned from the former VP & GM of GTE Government Systems

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AN INDUSTRY VIEW OF MSE LESSONS LEARNED

By

BERNARD RESNICK
FORMER VP & GM
GTE GOVERNMENT SYSTEMS
TAUNTON, MA
SEPTEMBER 1, 1993

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BACKGROUND

The Mobile Subscriber Equipment Program was awarded to GTE on December 19, 1985 after a lengthy and prolonged bidding cycle earmarked by a demonstration of the equipment and software using actual soldiers as the demonstrators. The program was envisioned as a NDI Program with the demonstration suite highlighted as the objective system. This approach was documented in a paper written by J. Ambrose, Undersecretary of the Army, in which he proclaimed the "warts and all" buying philosophy which was to become a major ingredient in the success of MSE. Literally interpreted it meant no changes would be tolerated from the objective system either from the Government or the contractor.

The program also had many features in it never before tried in an Army communications procurement including contractor supplied training both on site and at Fort Gordon, final sell-off to the user community and not the developer, contractor supplied logistics including field support centers as well as central depot installations back at the plant, hardware and systems warranty, a field operational test and evaluation conducted by the Thirteenth Signal Battalion at Fort Hood prior to program continuation. A comprehensive set of specifications defining the set of NDI equipment comprising the objective system, a very detailed and specific contract detailing the contractor requirements and all the above being done on a fixed price basis. In addition, a very detailed fielding and training schedule was supplied defining sell-off to the user including full sets of spares and GSE concurrently delivered. Since the accepting authority was the field user, it was obvious that total package delivery comprising on-time scheduling. Full sets of equipment, adequate training and support were to be necessary for success in addition to contractor financial performance.

It did very little for our sense of well-being to learn after the fact that our sole competition had bid 7 billion versus our winning bid of 4.3 billion. This certainly caused consternation in GTE management circles and caused much more program overview than normal.

IMPLEMENTATION

When one starts out to perform on a complex undertaking such as MSE with all of its concurrent requirements and implementation paths, detailed and comprehensive planning is the name of the game. In particular, in the four months prior to the award when we had to keep our team together for the sake of being able to get a running start we accomplished some major things and made major decisions including:

1. Defining and selecting a strategy for success. This is where the program is made or becomes a liability to all, contractor, developer and user. First of all one must understand what constitutes success in the minds of the customer. This was accomplished by interviewing Army and DoD personnel at all echelons and sensing common threads in their thought process. Certain things became evident very quickly: The Army was committed to the program and the management would legislate adoption of MSE providing it met technical and sustainment objectives including being capable of being easily operated and maintained by the soldier in the field. The Army was also prepared to legislate that the technical performance depicted in the demonstration was sufficient for Army purposes. This was a manifestation of the warts and all philosophy. It also became obvious that the field commanders who we regarded as the customer were less than happy with this turn of events because they were going to be forced to accept a system they had little capability of changing and in the process their current communications equipment was to be removed. They then faced the prospect of being in the operational red category while being trained to operated the as yet unknown and unproven system. All to be done in a way where their length of downtime was totally dependent on contractor schedule and technical performance.

The above caused us to set priorities with schedule performance being paramount closely followed by technical and logistic performance. We decided that cost performance would take care of itself if we met the other criteria. This led to our most important program concept and that was contrary to any other program that GTE had ever done that manpower costs were relatively unimportant to the success of the program and we could not afford to be undermanned in carrying out the program. It was also determined that we had better go along with the warts and all philosophy if we were to make a success. While we knew that there were better things we could do technically we decided at that time that we would treat these improvements via the VECP route at the right time. These decisions led directly to the next steps.

2. The next step was to implement the above decisions. The approach taken was to prepare and detail a schedule that would highlight points of concern relative to the objectives defined in the above process. This proved to be an extremely painstaking affair because what we were really doing was defining methods of operation that would in the end mean the difference between success and failure. Omission of items such as subcontractor control or adequate in-plant test would lead to these items not having adequate attention paid to them and thereby causing a disaster. Time does not permit an exhaustive list of these items being present here but suffice it to say that there were myriads of them. If we had performed the above two steps correctly and adequately, at this time we would be able to know what it takes to succeed and when and what we had to do time-phased, to make it happen. This directly leads to step three.

3. The key ingredient in this interval of time was manpower planning, acquisition of the team and personnel education so that we got what we had decided we needed in the process detailed above. To achieve this we defined not one but many organization structures each keyed to the phase the program was in. For each structure we defined what each group was to do and what constituted success in that particular case. During this task we paid particular attention to relationships both internal and governmental to assure compliance with our defined objectives.

For example; engineering was told that software excellence was a must and that we did not want to solve our problems in the field. That requirement turned into an in-plant exhaustive test program with PM/MSE and OTEA participation with nothing going to the field without witnessed Governmental testing. We made the Government a full partner in our test program. Notwithstanding this we knew that try as we might there would still be field problems and another requirement given was support the soldier in the field and let no problem be unanswered either real or imaginary or procedural. This turned into an MSE rule which was not to let any Army first fielding or any planned Army exercise, proceed without GTE support either from our trainers, engineers or field support personnel. It is my belief that this policy was one of the most critical decisions to our success because the user knew and much appreciated the fact that if there were a problem in their minds we would be there to fix it with no questions asked. At FOTE, General Thomas remarked that there were three battalions in the field; the Thirteenth, the OTEA Testers and the GTE Battalion. There were many other things we did to assure our success but again circumstances does not permit their enumeration.

4. Control methodology. We knew that change was going to happen so the environment of our plans was constructed to lend themselves to easy change while not altering our basic objectives. We came up with the control book which was a set of graphs and charts which would depict progress and issues at the time these were prepared and reviewed monthly by GTE Management and the cognizant directorate and their staffs as required. These sessions were also used for mid-course corrections as required . These books were also distributed to PM/MSE when review was complete. Financial data was not included. These books also formed the basic data used in all reviews with the PM/MSE and Army Management so that there was only one program accepted data base.

Another important use of the Control Book is to provide a forum which will define issues where the combined Government GTE team will ask the Government to take action to pressure other Government Product Managers as NSA or TACCOM to take action to provide needed equipment to MSE on time and with the correct functionality. This did not only exist for Government to Government issues but also highlighted areas where the Government could help with GTE subcontractor like British Marconi or Technology Partners. A prime example of industry and government partnership.

LESSONS LEARNED

Now what is the point of all this. The point is simply that this kind of approach worked very well in this case and is likely to work well in other cases. The major points of this methodology are:

1. Create a strategy for success by establishing early on whom your real customer is and listening to him, interview him with the full cognizance of your contractual customer. Then supply him with a product he can use, on-time and with no cost growth. This seems like a tall order but it really is not providing you understand the real customer's needs. A fixed-price contract is the correct vehicle for this methodology.

2. Establish a team relationship with all the customers especially the contractual one. Start with the premise that program success is in the best interest of all parties and therefore everyone should be aiming mutually at that goal and not having a team relationship hurts everyone.

3. No surprises, no hidden agendas. If you don't be up front with all the issues and problems how can you expect cooperation?

4. Don't be afraid to ask for help. People who are team players cannot help but assist especially if it's in their own best interests.

5. Understand the customer's problems and work with them. The customer is not an inexhaustible sink of money and time. Industry by understanding his limitations can go a long way towards solving them and attaining their own objectives while doing so.

6. Above all else be flexible. Conditions and desires change. As the CEO-political and personnel change during the course of a program so must the contractor's strategies. Success may later be defined differently. In addition, the team must react to on-going technology changes. When changes of a significant magnitude happen, then the probes described above must be revisited. The Control Book approach provided an ideal forum for these discussions.

The above treatise is not complete, it only scratches the surface of what can be done to make the military-industry complex operate as an excellent business enterprise. If we can't do this we will probably be out of business in short order. By the way does this approach embody the principles of TQM?

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This a lessons learned report on the how GTE interacted with the Army in the Mobile Subscriber Equipment (MSE) program, that includes a brief explanation on the Implementation of the program.

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