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Mission Capability Packages

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Winds of Change

The winds of change that envelop us are driven by four forces:

- a constrained military budget
- an end to bi-polar global competition with Moscow
- an increase in the number of non-traditional operations the military is being called upon to execute
- rapid advances in technology, particularly in telecommunications and information processing.

Properly harnessed and shaped, these forces can propel us into a future in which the military will not only remain a cornerstone of national strength and security but become an indispensable part of the fabric of world peace and prosperity.

Two prerequisites for success are in our control: 1) the development of new and innovative concepts and strategies, made possible by technology, to meet mission challenges, 2) the ability to transform these embryonic concepts and strategies into real operational capability unconstrained by institutional considerations. What is needed is a process that can ensure and facilitate the necessary innovations, then subject them to scrutiny and validation, and to bring them to fruition in the form of packages of capability designed to accomplish specific missions.

The Mission Capability Package concept proposed here is an extension of previous efforts initiated during the 1960s with the introduction of the Planning, Programming, and Budgeting Execution System (PPBS), continued by the Goldwater-Nichols legislation, and most recently advanced by the expanded JROC process, to build capabilities around a vision of how missions should be performed rather than an outmoded process based upon institutional artifacts.

This concept is the culmination of a long process of evolution in U.S. Force Planning. In the 1960s, the DOD was in need of "systems thinking" so that relationships among programs would be explicitly considered. Goldwater-Nichols extended this concept from programs to warfighting itself. Now the expanded JROC process is poised to complete this transformation—building institutions based upon mission requirements rather than trying to satisfy mission requirements within given institutional structures and constraints.

During the past year, ACT has been working with individuals in OSD, the Joint Staff, DISA, and ARPA to improve the technology insertion process. The approach described below is a result of these efforts to exploit the opportunities that technology affords to change the way we organize, equip, and fight.

Mission Capability Packages (MCP), as the end products of such a process, would contain concepts of operations, command and force structures, the corresponding doctrine, training and education, technology, and systems—with a support infrastructure designed and tailored to accomplish specific missions. An integral part of the MCP concept is the approach proposed to synchronize the insertion of advanced technology with our ability to change the way we fight so that we are able to take advantage of the opportunities afforded by technology.

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The creation of USACOM and the development of the adaptive force packaging concept represent a major step toward our ability to realize the objectives inherent in the MCP approach. Adaptive force packages must, due to the constraints of time, be assembled largely from "off-the-shelf" components. Within these limitations, USACOM's ability to tailor "force solutions" has been very successful. MCPs, with the freedom to design their own components from scratch, can fully leverage the capabilities of technology, thus creating an opportunity to radically transform current methods and approaches. Time is the key. The MCP process can produce a package in 6 months, 2 years, or 5 years. The time frame affects the nature and magnitude of the change that can be achieved and hence the degree of improvement in capabilities and/or efficiencies that can be realized.

Given the broad mission spectrum we face in the coming years, no one solution, in any dimension, is going to work. While we *may* find some degree of commonality in the nature of our conceptual, doctrinal, and organizational solutions to these mission challenges, it is only after we develop mission-specific solutions and then compare them across the board for common threads and components that the best solutions emerge. Thus, our approach to meeting our current and future challenges must be mission-oriented.

MCP Process

While much has been learned about putting technology to use, the pace of technological advances has quickened to such a degree that current DOD methods of incorporating technology are well behind the power curve. Although acquisition reforms are underway to help reduce the time it takes to go from design to development,

they alone will not be sufficient to bring about the changes needed to meet today's mission challenges.

Acquisition reforms alone are insufficient because the technology development cycle is out of synch with military strategy development and the elements needed to implement military strategy. Speeding up the technology acquisition cycle without addressing the inertia in the process by which we develop military strategy, concepts, and doctrine just makes these processes more out of synch. What is needed is an approach that *synchronizes* the development of military strategy with the advances in technology and with the technology insertion process.

The speed at which technology can be deployed is only one aspect of the problem. Consider a situation in which new technology can be made instantly available to operational users. How much of the technology's potential will be realized? In point of fact, that answer is that, at best, only incremental improvements will be made, thus only a fraction of the potential utility of the technology will be realized. This is not to say that such improvement would not be useful, or even important. But inescapably, a great deal of the potential of the technology would go unutilized. This scenario would be repeated over and over as the latest technology replaced older technology. Only a series of incremental changes and improvements in operational capability would be achieved. *The MCP process address this problem squarely.* It provides an opportunity to make radical changes as well, if indeed they are needed.

Figure 1 presents an overview of the process by which new MCP concepts would be conceived, tested, retested, and finally transformed into real operational capabilities. To achieve its goal, the MCP process focuses, synchronizes, and coordinates the efforts of numerous DOD organi-

About this Paper

Working closely with the operational community and the technologists at ARPA and DISA, the INSS Center for Advanced Command Concepts and Technology (ACT) is pursuing the development of concepts for specific MCPs by bringing together interdisciplinary, joint, and inter-agency teams to explore and assess new command concepts and their implications for other elements of a mission capability package. ACT helps insure that these teams are fully cognizant of both the needs of the operational community and the opportunities that technology can provide as well as its limitations. For more information, contact: Dr. David S. Alberts, Director, ACT 202-287-9210 x512, e-mail albertsd@ndu.edu.

zations. Components of this MCP process currently exist, but the glue needed to hold these pieces together is weak and the overall process itself is not as well focused as it could be. We are currently weakest in the front end or conceptual phase and in accepting and implementing approaches that require changes in culture.

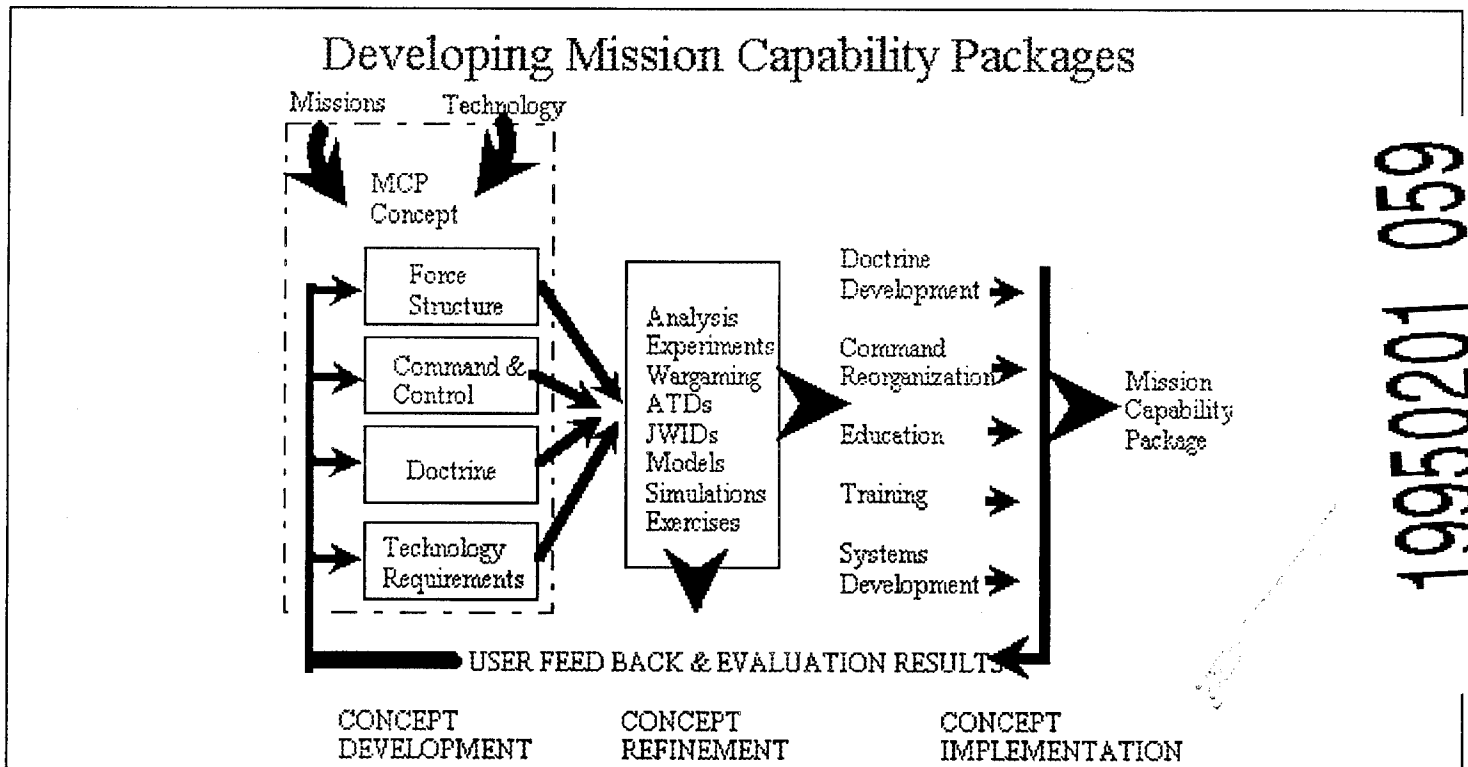
In the Concept Development Phase, groups of individuals with the requisite operational and technical expertise would be brought together in a safe environment with the charter to "think outside of the box." NDU offers an environment particularly well suited to this task. As concepts jell, they would be then subjected to a series of analyses, experiments, and tests to determine if they merit adoption by DOD. It is essential to keep users heavily involved insuring that each aspect of the package [command concepts and organization, doctrine and procedures, force packages, technology and systems, training, and education] is mutually supporting and operationally sound. The Concept Refinement Phase, having a distinctly "hands on" flavor, is essential to facilitating effective communication between the communities.

DOD has invested in a full spectrum of models, simulations, testbeds, and instrumented ranges to support the testing of weapons, systems, equipment, doctrine, and concepts of operations and for the training and exercising of our forces. While these valuable resources help

to support the assessment and refinement of MCP concepts, several areas of weakness need to be addressed.

Most urgently there is a need for explicit and flexible representation of command and control and associated information effects including what has become known as "information war." While work needs to be done at all echelons of command, the most pressing need is at the CINC and JTF levels—with emphasis on coalition operations. These models and simulations should be able to accommodate changes in all aspects of the MCP—including doctrine, organizations, command approaches, lines of authority, and information flows. Without this capability, these expensive investments would be unable to shed light on the critical issues being addressed by DOD. Equally obvious is that these models and tools no longer can be designed solely to support a particular segment of the community (e.g., training), but need to be built with the idea that they will be used in all phases of the development of MCPs.

The last phase of the process requires the implementation of the institutional changes, technologies, and systems that are required by a MCP. At some point, a successful mission capability package concept will have gained sufficient credibility that the need for certain institutional changes will become widely recognized. This point is a critical junction



because it is here that the battle with the forces of inertia is joined. Given the knowledge of this battlefield in advance, it is important that the senior civilian and military leadership fully embrace the MCP process and stay abreast of the development of MCP concepts and their progress.

The Department of Defense needs to do a

mission-by-mission review of how we can meet the challenges we face. Since organizations continually need to accommodate change in the nature of their missions, organizations also need to be structured to facilitate the development of new MCP concepts and their translation into operational capability.

Recommendations

- Develop, as an integral part of the expanded JROC process, Mission Capability Package concepts targeted at the out years of the planning cycle.
- Use these MCP concepts to drive R&D priorities, to focus the technology insertion, and to guide organizational and force planning and

and doctrine development.

- Integrate future visions of command and control, information warfare, and intelligence into a coherent set of concepts and capabilities.
- Include explicit representation of command and control and information warfare effects in models and simulations.



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