

1.0 Introduction

In the spirit of the *New World Vista* study, the *Mobility Panel* set out to select areas of rapidly changing technology which could have an impact on improving the mission capability of Air Mobility Command (AMC). Before discussing the nature of this selection process it should be recognized that air mobility embodies a very broad spectrum of activity. The nature of this responsibility is covered in Section 2 of this report. The role of AMC in *National Military Security* is brought out, the *Operational Objectives* are discussed, and the specific key *Operational Tasks* are delineated. Also provided are a large number of the deficiencies AMC has already identified.

A point to be made about the tasks and deficiencies identified in Section 2 is that not all the desired improvements need to rely on advanced technology. Many can be done right now, but need support and funding. A good example is that of the global positioning system (GPS). The value of GPS has been increasingly recognized over a number of applications. As a particular example, its use as a powerful way to obtain precision air drop capability has been brought out. This has been recognized, good work is underway, and the feeling is that this work will continue. Thus, while the Mobility Panel considers this application as high priority, it has not been specifically included in their high priority listing because of the efforts already underway.

Charter or Guidelines

In the process of selecting areas of rapidly changing technologies applicable to the *Mobility Mission* the Mobility Panel used a charter based on the following guidelines:

- a. Identify most revolutionary technologies
- b. Evaluate impact on future systems
- c. Consider impact on affordability of mobility mission, and
- d. Identify which technologies can be obtained by capitalizing on commercial development or have dual use.

Following the guidelines, the panel selection process went essentially as follows:

1. Identify missions, requirements and needs
2. Identify needs which technology could help solve
3. Relate needs to advanced technologies
4. Postulate future systems affecting improvements in mobility operations, utilizing advanced technologies
5. Establish evaluation and selection criteria
6. Evaluate proposed systems and select most promising
7. Coordinate with technology panels (cross talk with the Information, Directed Energy, Aircraft and Propulsion, and Materials panels)
8. Prepare detailed description and assessment for selected systems and

9. Emphasize technology advances required.

The possible future systems that were identified are indicated in Section 4 of this report. The prioritized top five future systems selected are presented and discussed in detail in Section 6. The final conclusions and recommendations reached are provided in Section 7.

The Approach and Problem Selection

An indication of the nature of the problem areas that were considered is given by the following listing:

- More range
- Faster response times
- Better communication
- Improved all-weather operation
- Real-time in cockpit (situational awareness)
- Cheap, precision airdrop
- Better material handling
- Better training
- Improved refueling capability
- Improved reliability and inflight trouble shooting and
- Improved defensive systems.