

ELEVENTH AIR NAVIGATION CONFERENCE

Montreal, 22 September to 3 October 2003

Agenda Item 1: Introduction and assessment of a global air traffic management (ATM) operational concept

1.2: Enabling concepts in support of the global ATM operational concept

ATM OPERATIONAL SCENARIOS

(Presented by the Secretariat)

1. INTRODUCTION

1.1 The Air Traffic Management Operational Concept Panel (ATMCP) had determined, over the course of its work, that it should develop operational scenarios to support the ATM operational concept and to facilitate an understanding of the concept, including how the concept was intended to work and how it was applied. Scenarios would also illustrate the benefits that could be expected with implementation of the concept and provide the basis for the development of guidance material for research and development and also serve as a basis for development of ATM requirements.

2. DISCUSSION

2.1 As indicated in AN-Conf/11-WP/4, the ATM operational concept describes the services that will be required to operate the global ATM system up to and beyond 2025. It addresses what is needed to increase user flexibility and maximize operating efficiencies in order to increase system capacity and improve safety levels in the future ATM system.

2.2 The ATM operational concept is not, however, a technical manual or blueprint nor does it detail “how” things will be enabled. This would be the subject of a lower document in the hierarchical structure, which may include concepts of operation or use, technical standards and strategic plans.

2.3 In developing the attached set of operational scenarios, the aim of the ATMCP was to illustrate clearly the amount of strategic and pre-tactical planning actions that were required to ensure that a flight in 2025 was no longer subject to delay or other performance constraints and that the most significant shift in ATM to be brought about by the operational concept would be the move away from the “just-in-time” air traffic control of today to a more strategic-based air traffic management. For that purpose, the scenarios presented are based on a “slice of time” in 2025 and contain extensive examples of various functions, highlighting the differences from today’s system that could be expected.

2.4 Based on the above, the scenarios treat the issues of strategic, pre-tactical and tactical planning process stages; take into account that the respective roles and responsibilities of pilots and controllers would

change between now and 2025, the possibility of applying slot-times, for which the use of the term “trajectory contract” is proposed when discussing the future ATM system. The scenarios also portray a more dynamic ATM system which more systematically grants advantages to suitably-equipped aircraft.

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