



WORKING PAPER

ASSEMBLY — 37TH SESSION

TECHNICAL COMMISSION

Agenda Item 45: Next Generation of Aviation Professionals

ADDRESSING THE FUTURE OF COMPETENT AVIATION PROFESSIONALS

(Presented by the United States)

EXECUTIVE SUMMARY

In view of the anticipated shortage of aviation personnel in the next eight years, the United States believes it is necessary to address the training and competencies of aviation professionals, to focus on pilots.

Action: The Assembly is invited to adopt a resolution directing the NGAP Task Force, through its Flight Crew licenses sub-group, to include the following actions:

- a) develop definitions for competency and professionalism;
- b) conduct a review of global training programs to develop a foundation of harmonized training standards and address a potential different demographic of pilot candidates; and
- c) establish sub-working group(s) within NGAP to:
 - 1) describe the tasks expected of the pilot;
 - 2) develop satisfactory performance standards for each task;
 - 3) describe the characteristics of professionalism; and
 - 4) serve as a focal point for global outreach and encourage Contracting States to participate in information sharing about pilot development for air carrier operations.

<i>Strategic Objectives:</i>	This working paper relates to Strategic Objective A: Safety - <i>Enhance global civil aviation safety.</i>
<i>Financial implications:</i>	Implementation of the HLSC conclusions and recommendations.
<i>References:</i>	Doc 9935, <i>Report of the High-level Safety Conference (2010)</i>

1. INTRODUCTION

1.1 The global aviation community is facing a serious challenge. The demand for aviation professionals has increased while the number of persons with military and civil experience in this profession has decreased. As discussed at the Next Generation of Aviation Professionals Symposium in March 2010, the worldwide aviation industry predicts shortages of 200,000 pilots and 400,000 maintenance personnel by 2018.

1.2 While the United States recognizes this is an industry-wide problem on a global scale, this paper will focus on the aviation operations that depend on pilots.

1.3 There is an increasing need to create and implement a workable methodology to develop pilots with adequate training, demonstrated competence and professionalism to fill the anticipated void.

2. BACKGROUND

2.1 The last four decades of airline operations in the United States is marked by a significant pilot hiring trend, starting at the end of the 1960s with a steady and steep hiring curve from the mid-1980s into the turn of the century.

2.2 Today, the United States is beginning to see the first phase of retirements of those pilots who began their airline careers at the start of this time period. According to Boeing and Airbus projections, the number of aircraft that will be in operation in the United States in the next ten years will dramatically increase.

2.2.1 For the United States, this means a substantial increase in the number of pilots required at the same time a substantial number of pilots are retiring. Estimates vary, but the number of pilots needed in the next couple of years as retirements begin have ranged from as few as 375 to as many as 800 pilots each month for the next 15 years.

2.3 To address this eventuality, the United States is examining what actions are necessary to prepare to meet a substantial demand for trained, qualified, and professional pilots. It is imperative that the persons filling these necessary positions continue to exhibit the level of competence and professional standards that are in existence today.

2.4 The United States, particularly the Federal Aviation Administration (FAA), is examining the potential of establishing alternative requirements for pilots entering Part 121 air carrier operations, such as requiring specific pilot experience.

2.4.1 The FAA is also considering the development of a system for training air carrier pilots, including a review of the ICAO-developed Multi-crew Pilot License (MPL) program, to determine if such a structure could be adapted to fit the needs of U.S. pilots and provide the required levels of competence and professionalism that will be required over the next 15 years.

3. DISCUSSION

3.1 Based on the U.S. experience and the need to address this issue globally, ICAO could develop a process to take those selected as future aviation professionals from their current knowledge, skills and experience base, to a level of knowledge and ability that will satisfy the duties and responsibilities demanded by the position these potential employees would occupy.

3.1.1 ICAO could establish a methodology to allow the aviation industry to determine the career path potential of pilot candidates seeking employment in the aviation industry.

3.1.2 We already recognize that the maximum use of simulation for both initial and recurrent training and evaluation provides pilot candidates one of the most definitive ways to achieve the highest level of success in the shortest time frame possible.

3.1.3 However, it is imperative that each pilot candidate is exposed to interdependent operations with other individuals who work both inside and outside of the airplane. This would include identifying the tasks the pilot would be responsible for performing as well as practicing these tasks in scenario-based training.

3.1.4 These efforts must reflect an overall international harmonization of tasks and performance standards.

3.2 The Next Generation of Aviation Professionals (NGAP) Task Force could review established worldwide programs that develop aviation professionals and create a global foundation to utilize harmonized standards to train and license pilots. Program reviews could include ICAO's Multi-crew Pilot Licensing (MPL), International Air Transport Association (IATA)'s Training and Qualification Initiative (ITQI), FAA's and European Aviation Safety Agency's (EASA) regulatory requirements and other commercial pilot licensing programs to determine a mitigating strategy for possible future pilot shortages.

3.2.1 The FAA is currently evaluating the MPL process to determine its potential application within the global community.

3.2.2 This approach can provide a basis for development of tasks as well as task applications and procedures for the roles and responsibilities of pilots.

3.2.3 The NGAP Task Force could then provide guidance on standards and recommended practices to the Council for evaluating the competency of pilots engaged in air transportation based upon the performance standards established by ICAO.

4. CONCLUSION

4.1 This is a critical issue facing the world's aviation system. We must ensure that the next generation of aviation professionals are given the opportunity to explore, practice, and assimilate the skills of the tasks that these professionals must master and maintain.

4.2 These tasks should be standardized to a detailed level and repetitively trained and practiced to that detailed level until proficiency is achieved.

4.3 Professional performance by the pilot during evaluations will verify that the standards established have been successfully achieved.

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