

07POS01

IFALPA Statement: Multi-Crew Pilot Licence (MPL)

Summary

The new Multi-Crew Pilot Licence (MPL), if applied correctly, could produce a highly qualified new hire first officer for the airlines. However, applied incorrectly in response to cost or time pressures to respond to the current pilot shortage, it could have a detrimental impact on flight safety. Improper application could also erode current, proven training standards.

IFALPA has yet to be convinced that the new MPL scheme will provide sufficient guarantees for safeguarding the highest safety and training quality standards currently in place. Any downgrading of these standards cannot and must not be accepted in an industry that has the goal of maintaining a continuous improvement of safety standards in the face of ever growing challenges.

Only a well-devised MPL scheme that is gradually introduced into common use, coupled with an effective Advisory Board system with a clearly defined charter that assists in implementation of any MPL scheme, will overcome the challenges posed by the new MPL concept. IFALPA will continue to contribute ideas and expertise to assist in obtaining appropriate solutions to any MPL implementation issues, but will only give its support when we are convinced that MPL will assure a greater safety margin for passengers, crew and the general public.

1. MPL Background

The International Civil Aviation Organization's (ICAO) Amendment 167 to Annex 1 of the Convention on International Civil Aviation and supporting Procedures for Air Navigation Services – Training (PANS-TRG) will establish a new flight crew licence called the Multi-Crew Pilot Licence (MPL), which is due to come into effect on 23 November 2006. This new grade of certificate is the result of work by ICAO's Flight Crew Licensing and Training Panel (FCLTP). Individual countries will incorporate the MPL into their individual licensing structure as they find necessary. Upon completion of the MPL training programme, the candidate will be licensed to act as a first officer in commercial air carrier operations, and will possess an instrument rating for multi-crew operations and an aircraft type rating.

The ICAO amendment for the MPL allows for the development of an alternative pilot training programme over those found in traditional licensing methodologies. The goal of MPL training is to train candidates with no prior aircraft flight experience to be competent flight crew members in today's commercial aviation environment. The MPL training programme uses a competency-based approach in lieu of the "required hours" approach utilised in traditional training methodologies. In addition to training a candidate in basic flying skills, MPL training maximises the use of two-pilot airplanes, simulators, and flight training devices to train candidates for airline entry proficiency on turbine powered aircraft, and establish a foundation in crew concepts such as Crew Resource Management (CRM) and Threat and Error Management (TEM).

The minimum experience that an MPL holder will be required to have is 240 hours total time, which may be obtained in either an aircraft or a simulator. Particulars of the elements of instruction are contained in the ICAO Procedures for Air Navigation - Training (PANS TRG) document, which will become effective coincidentally with the applicability of the Annex 1 Standard. It was agreed that MPL training would be competency-based and conducted in a multi-crew operational environment. The PANS-TRG Document states: The ICAO Standards for the MPL specify the minimum number of actual and simulated flight hours (240). However, they do not specify the breakdown between actual and simulated flight hours and thus allow part of the training curriculum that was traditionally conducted on an aeroplane to be done on flight simulation training devices.

The strength of the MPL licensing process allows an airline to provide multi-crew/multi-engine training in a structured environment that is tailored to commercial airline operations versus having student pilots accumulate flight hours that are often flown unsupervised in a single-engine/single pilot airplane. MPL training will also expose ab-initio pilots to CRM and TEM much earlier in their flight training. Most members of the ICAO FCLTP, the body that defined the MPL licensing requirements, agreed that a properly developed MPL training syllabus would require more flight hours and cost more than current traditional ab-initio programmes. Such a programme has the potential to produce in a shorter amount of time pilots who are better qualified to operate safely in commercial operations.

The International Federation of Air Line Pilots' Associations (IFALPA) recognises that the training required for a candidate to be issued an MPL may have potential benefits when developed and implemented properly, and with adequate regulator oversight. IFALPA recognises that carefully chosen MPL candidates will complete a focused training programme that incorporates the significant training concepts developed under traditional training methodologies during the past 30 years. These established concepts, in addition to new and innovative technologies, may be integrated into a carefully constructed and supervised programme that will be able to efficiently train competent flight crew members in commercial air operations through an expedited training programme with minimal actual aircraft experience.

However, IFALPA believes that a data-driven approach is necessary to ensure that MPL candidates will meet or exceed the standards currently required in traditional training methodologies. The MPL concept must be demonstrated and proven using quantifiable metrics before a candidate in this programme is permitted to perform flight deck duties in commercial air transport operations.

2. IFALPA's Concerns

PANS-TRG document not complete

The MPL pilot must be able to consistently demonstrate satisfactory aeronautical skills and cognitive skill sets to the established level of proficiency required for actual air carrier operations. In that regard, it is significant to note that the industry has not yet defined the appropriate flight training devices required to measure proficiency for aeronautical tasks and cognitive skill sets. Presently, ICAO has tasked the Royal Aeronautical Society (RAeS) to identify the appropriate flight training device for each component of the instruction, validation and checking envisioned by PANS-TRG. The results of the RAeS work will ultimately be incorporated into PANS TRG as guidance for the construction of an MPL syllabus.

Unfortunately, this guidance will not be available for the first efforts undertaken to produce MPL holders. This means that the burden of making certain that MPL holders reach the required level of proficiency will fall on the individuals administering progress checks during the training cycle and by the official conducting the actual "rating ride" which results in the issuance of the licence.

Reduction in actual flying hours

The MPL licence allows a reduction in actual flying hours during training, conceivably towards zero in the distant future when more advanced simulators and training devices are developed. To ensure that safety will not be compromised in any manner, any such reduction from the current ICAO minimum hours required in an actual aircraft for a traditional commercial licence (140 hours for an approved training programme) has to take place in a carefully monitored and controlled manner, with emphasis placed on avoiding sudden and substantial reductions in actual flight time. This step-by-step approach is outlined in Chapter 3, Appendix C of the PANS-TRG document and is entitled "Guidelines for the Implementation of the MPL." IFALPA proposes that the incremental substitution of simulated hours for actual aircraft hours follow the guidelines stated in paragraphs 2.2 and 2.3 of Appendix C.

IFALPA notes with concern that a number of recent accidents were contributed to, by loss of control or a lack of handling abilities. IFALPA strongly believes that maintaining a high number of actual flying hours will ensure that current quality standards are maintained, whereas offering the possibility of drastically cutting real flying hours would represent a significant downgrade in the quality of training and would be a degradation to aviation safety. The actual flight hours ultimately required is still unknown and must be determined by a rational measuring procedure.

Lack of proper analysis and scientific basis

The MPL philosophy is un-proven and is therefore a significant departure from existing pilot instruction methodologies. No proper analysis of the new rules has yet been undertaken nor is there any scientific basis upon which to rely to conclude that the new MPL philosophy is a sound procedure that meets the current level of safety provided by traditional training methods.

Flight Training Organisations (FTO) are mandated to focus on Human Factors, CRM, teamwork and TEM, as required by the MPL, and will therefore be faced with new standards for experience, knowledge and quality. It is unclear how FTOs will deal with this challenge, since it is most likely that the most experienced flight trainers can be expected to be hired by airlines. In addition, page 55 of the ICAO Amendment 167 to Annex 1 states: "3.2 When a Licensing Authority approves a training programme for a multi-crew pilot licence, the approved training organization shall demonstrate to the satisfaction of the Licensing Authority that the training provides a level of competency in multi-crew operations at least equal to that met by holders of a commercial pilot licence, instrument rating and type rating for an aeroplane certificated for operation with a minimum crew of at least two pilots." It is questionable if the FTOs have the expertise or scientific evidence required to demonstrate that they meet this standard at the current time and will be able to "preserve and improve upon existing flight safety levels" as required by the ANC in Amendment 167.

Regulators must be required to perform strict quality control of FTOs and their MPL programmes. In many cases it is questionable whether or not the National Authorities will have sufficient experience and/or capacity for developing competency-based flight training programmes and will possess the ability to provide quality assurance of the new MPL programme. Before a State can implement an MPL programme the State has to define what its assessment system is going to be and how it is going to use this system to ensure that MPL pilots have met each of the competency requirements.

Airlines that hire MPL candidates must be required to properly train these new recruits, focusing on airmanship, judgement, decision-making and aircraft handling. This training will cost money, and given the current financial difficulties of many operators and increasingly fierce industry competition, it is difficult to understand how some airlines will be able to finance such a programme. Under these circumstances implementation of an MPL programme could very well result in a reduced level of experience and safety.

Scientific Evidence and experience on the use of flight simulation to replace actual aircraft flying in the early phase of airline pilot training has to date been limited, and is thus an unproven concept. In addition, the Royal Aeronautical Society's International Working Group on simulators has just started the process to identify the appropriate flight training device for each component of the instruction, validation and checking envisioned by the PANS TRG document. Until such time that the RAeS has completed its work, IFALPA firmly believes that extreme caution has to be exercised when replacing actual airplane flying experience with simulated flying hours as a means for teaching aircraft handling and airmanship skills.

ICAO will attempt to monitor the development of the MPL programme. Regulatory authorities are required to collect individual progress assessments, rating ride reports and recurrent checks and to forward these to ICAO for analysis by the Flight Crew Licensing and Training Panel (FCLTP) of the Air Navigation Commission (ANC). It is unclear how ICAO will define standardised assessment criteria as well as a data collection format for the different states. It is also unclear who will collect the data and how it will be analysed to ensure safety is not compromised.

IFALPA's Proposals

MPL Advisory Board

IFALPA proposes the creation of a national MPL Advisory Board in any State where the MPL programme will be introduced. The MPL Advisory Board's aim would be to effectively monitor the implementation process of an MPL training programme and to also effectively evaluate the results of the MPL training.

The MPL Advisory Board must include pilot representatives from the State implementing an MPL programme. The Advisory Board should also involve professionals from relevant parts of the industry, including training and education experts and members from safety organisations. The Advisory Board should provide expertise, assessments and valuable advice on all proposed new MPL programmes prior to their approval by the National Authorities. It should also assist these Authorities in their evaluation of the training programme to ensure that the MPL programme produces at least an equivalent level of safety and professionalism as any current schemes that are in effect.

In addition to involvement in the implementation phase the Advisory Board must continue to monitor the quality assurance and oversight of all MPL programmes within their State, as well as the progression of MPL pilots as their careers progress. The Advisory Board should remain active until such time that sufficient data and experience exists which accurately demonstrates that MPL programmes can produce pilots at a level of safety and professionalism equivalent to the traditional ATPL. At a minimum, the national MPL Advisory Board should remain until ICAO completes its MPL review in the FCLTP and any recommended changes are implemented and validated.

ICAO Guidelines for the Implementation of the MPL

IFALPA strongly encourages States to follow the intent and guidance of Chapter 3, Appendix C of the PANS-TRG document. These guidelines offer a cautious step-by-step approach to replacing actual aircraft flight training hours with simulator hours. During the FCLTP proceedings a survey of current ab-initio training programmes showed an average flight time of approximately 230 actual aircraft flight hours. The intent of section 2.2 and 2.3 of Chapter 3, Appendix C, was to not allow the first MPL courses to reduce the actual flight hours much below this average (or the hours required in the FTO's current ab-initio program) until such time that replacement of some actual aircraft flying hours with simulator hours could be scientifically validated. In other words, what was agreed to by the ICAO FCLTP was for the first MPL courses to conduct most of the training in actual airplanes, except where it made more sense to use simulators (i.e., TEM, CRM, in-flight emergencies). Once the MPL concept was proven safe, and better simulators and other training devices were developed, some of the airplane flying could be replaced by these and other training devices in an incremental process with proper validation. The substitution of simulated hours for actual airplane hours was intended to be a gradual process.

Link between the Flight Training Organisations and Operators to Be Maintained

Only a Flight Training Organisation contractually linked to an airline should receive approval to issue an MPL. Unless this requirement is met, supervision, control, and feedback of the training cannot be assured because the direct link between the airline and the training is not maintained. A requirement of the MPL is to train to Standard Operating Procedures (SOP). This requires the training to be airline specific, and therefore MPL instructors must be familiar with the airline's SOP's through personal observation.

Evaluation of the MPL

An evaluation of the MPL pilot would verify that he or she has acquired the necessary airmanship, judgment and technical skills. This evaluation could be demonstrated at the pilot's first re-current check by using exercises involving hand flying skills, such as: windshear encounter in direct law, gusty cross wind landings onto a wet runway, loss of all generators requiring flying with basic instrumentation and flying a descent profile without FMS. Since both pilots in modern two pilot aeroplanes can become quickly task-saturated while handling an emergency during an approach in marginal weather, MPL pilots can be given scenarios requiring them to hand-fly the airplane and make decisions independent of the Captain.

Adequate monitoring by the FCLTP:

To maintain current levels of safety, ICAO should monitor the implementation of MPL training schemes to ensure they follow the intent and guidance of Amendment 167 to Annex 1 and the PANS-TRG document. IFALPA intends to make certain that ICAO monitors the implementation of MPL courses, collects the assessment information required from each State that issues MPL licences, that it does in fact review the entire concept at the fourth anniversary of the applicability of the Standard and that it approves, amends or rejects the concept as indicated by actual field results.