

FAA REGULATORY OVERSIGHT AND UPDATE

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I began my career as a young engineer working on missile design. We had an airframe life in those days of approximately one minute. You were not happy unless the payload and the missile blew up. Now that I have aged a few years, we are looking at preserving airframes into the fourth decade. In fact, we would like to end up in terms of safety in the boneyard tucked away down at Davis Monthan, or someplace like that. My career at this point is to be dedicated to preserving those airframes and to regulate the people that work with them.

We in the FAA have two ongoing regulatory activities that relate to maintenance technicians in Parts 65 and 147. Part 147 relates to maintenance training and the certificated schools where people come for their primary training. The training in the schools last for approximately two years. Part 65 regulates the maintenance technician himself or herself. Where are we right now? I have to tell you that Part 65 on the maintenance technician is moving far faster than we expected. It seems like every time we have a meeting, we make new advances in the notice of proposed rulemaking.

Approximately five years ago, we began a project to change the rules for aviation maintenance technicians schools. The process resulted in a final rule in 1992 (midyear) in which we upgraded nondestructive inspection for composites and turbine engines; in fact, avionics or electronics were also upgraded. One of the problems we found was that the 200 schools we have are pretty much stuck at 1900 hours of training, primarily because there was an implicit limit of two years of training. One of the problems we had with the school curriculum being confined to two years was that we could not upgrade our standards for the technicians. The industry's needs have moved beyond what can be done in the limit of 1900 hours; this limitation is slightly outdated. We started an Advanced Standards Initiative (ASI) last year. The ASI would involve training and certification, thus encouraging technician schools to develop new curricula.

We already have four or five schools that are quite interested in helping us create this Advanced Standard program, and we are creating Centers of Excellence for Technician Training. These centers would train technicians to advanced standards. A task force is currently working with industry to determine the length of ASI training. We believe that it will be between 500 and 700 hours, but we do not want to nail that number down until industry gives us a reasonable figure. We are also finding it best, in terms of regulatory activities, to keep the curriculum flexible. In order to ensure that the curriculum remains flexible, we may try a different type of certification for the training provider. In other words, we may look more closely at the training provider, rather than trying to adhere to a rigorous curriculum, to provide flexibility in the curriculum yet regulate it through the training provider.

We have an Aviation Rulemaking Advisory Committee (ARAC) that has met a number of times. This is an FAA-industry working group that is helping us with the Advanced Standard Technician (AST). The primary difference in this program is that the person gaining the advanced knowledge would pay for it himself, as opposed to the current process where the airline trains an individual after graduation. Our bottom-line about both programs is that maintenance errors must be reduced.

There are many possible benefits to industry ([Table 1](#)). We believe that the advanced curriculum will lead to an immediate reduction in maintenance errors and a corresponding increase in the operation's efficiency. The operator can then focus internal training on type and difference; that is certainly not the case today. A big portion of operator's training time is currently devoted to things like basic electronics training.

Table I Industry Benefits

- Existing qualified technicians will be grandfathered
 - Some advanced training costs shifted to technicians
 - Reduction in training programs at operators
 - Operator training can focus on aircraft type and company procedure training
 - Reduction in maintenance errors
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The Professional Aviation Maintenance Association (PAMA) is solidly behind this proposal. They do believe that their members should pay for this training themselves. We believe that an ASI technician will be significantly more valuable to the employer and hence the certification is more valuable to the technician ([Table 2](#)).

Table II Technician Benefits

- Existing qualified technicians will be grandfathered
 - ASI technicians will be more employable
 - ASI training will be an extension of basic school
 - ASI technicians will work at a higher standard
 - ASI technicians will be more valuable to employer
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Table 2

[Figure 1](#) shows the current training structure. If you take the horizontal axis as time to train a technician and the vertical axis as the depth of training, you see that the primary training for an aviation maintenance technician (AMT) is general airframe and power plant courses that last for approximately 1900 hours. When apprentice AMTs come out post-certification, they are trained by industry. Currently, they are trained in type training, processes, and company culture. This training is quite costly to the industry.

Current Training Structure

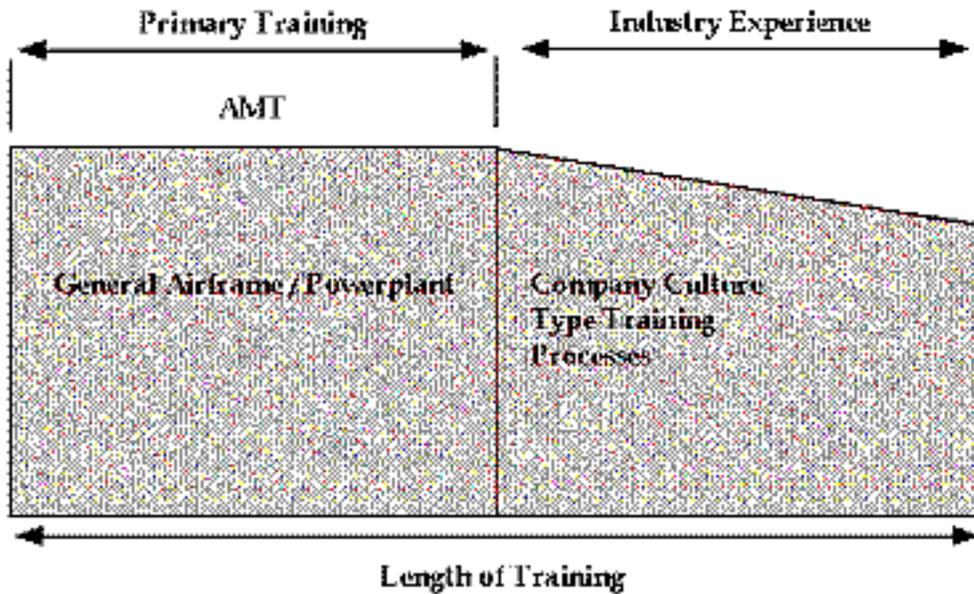


Figure 1

Figure 2 is the essential part of our proposal. What we are saying is that when the postgraduate student comes out and if he or she were working in the air transportation industry, the student should take the Advance Standard Initiative, providing his or her own training. You can see that the advanced training is to the same depth as the primary training. At some unspecified point in the advanced training (we do not yet know how many hours that would be), the student would have avionics, electronics, nondestructive inspection, composite training, and some pieces of type and culture. Industry would then provide the remainder, to the right, which is, again, primarily type and difference training on the aircraft in an airline's fleet.

Proposed Training Structure

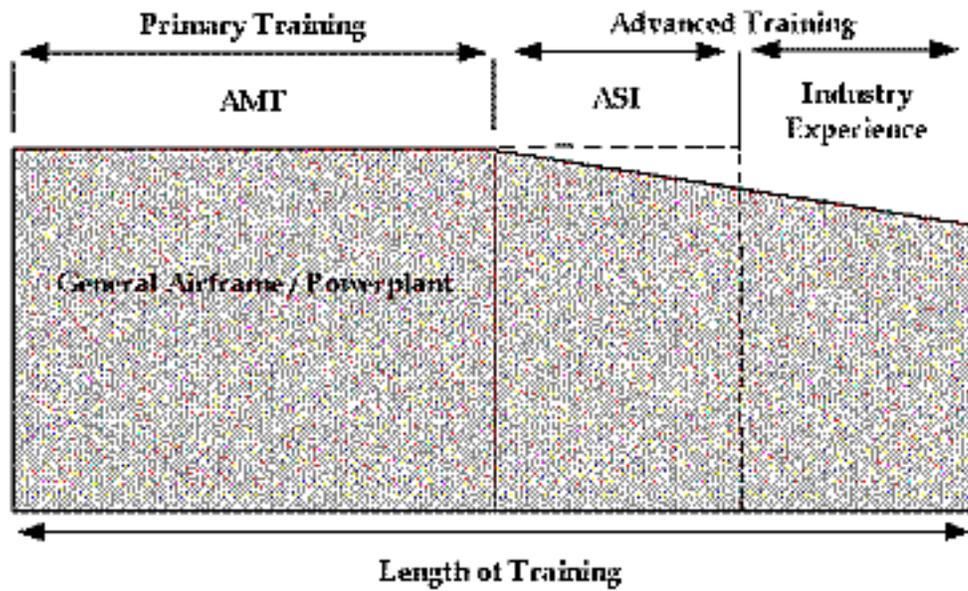


Figure 2

Figure 3 shows what we think the regulatory structure will look like. The structure continues to evolve, as we have had a number of meetings, and the proposal is evolving rather rapidly. Currently, in the portion to the left, a student becomes an AMT by going to a Part 147 school, by having a certain amount of experience in the industry, or by a combination of 147 school and experience. AMTs are eligible after three years for inspection authorization, giving them certain privileges primarily on light aircraft. However, it also extends to some transport operators for certain types of work. Our proposal is that advanced ASI status would be grandfathered initially for AMTs working in the field. After the grandfather phase is over, ASI status would require advanced schooling. Upon successful completion, they would be an AMT ASI and have the privilege of working for the airline industry, primarily in return to service of Part 25 aircraft.

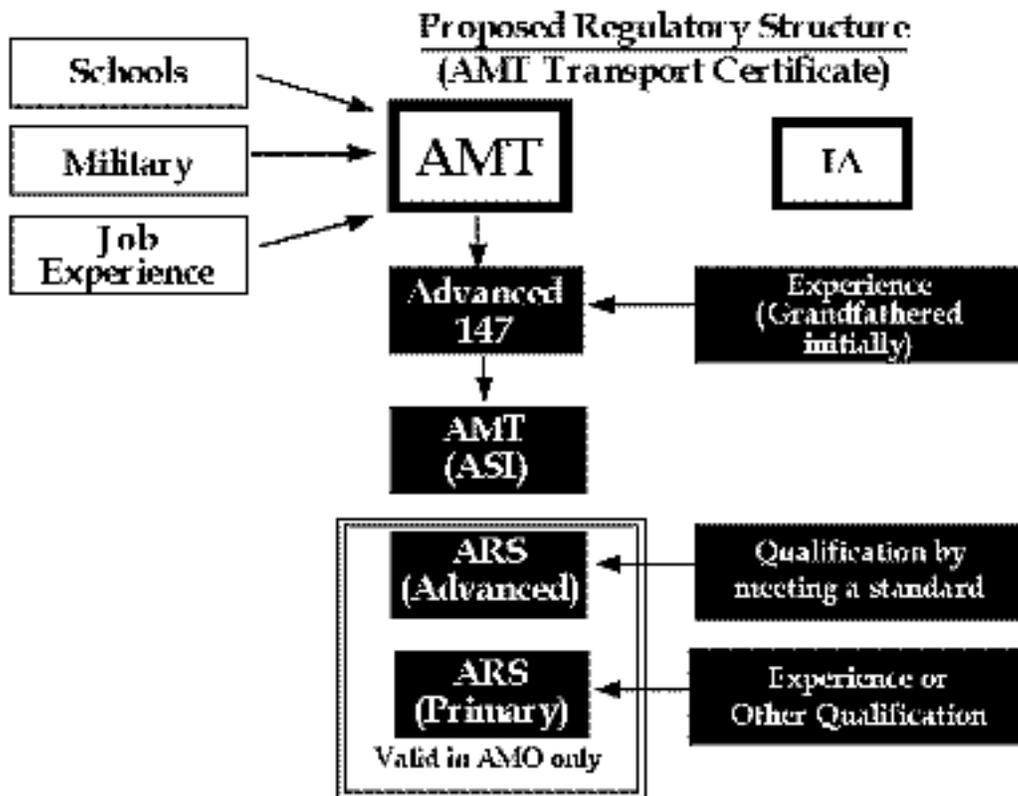


Figure 3

At the bottom of [Figure 3](#) is special portion of the proposal I have not discussed; it relates to advanced standards for specialists. As an AMT is a generalist, there is also another program for the specialist, primarily for AMTs working on nondestructive inspection, avionics, electronics, composite repair, and other specialties. The proposal is that a primary ARS (aviation repair specialist) can become an advanced ARS through experience only and with some limited training. We are now going to specify qualifications as standards for particular types of specialties. The details have yet to be worked out. We are working with industry to identify which specialties need a higher qualification and which types of training would be appropriate. You see that this is marked valid in AMO only. That means in an approved maintenance organization only, which would be an airline shop; you cannot go out there and work on your own. Only an approved maintenance organization can exercise those privileges.