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Docket Management System
U.S. Department of Transportation
Room Plaza 401
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Washington, D.C. 20590-0001

Electronic address: <http://dms.dot.gov>

REFERENCE: Docket No. FAA-2002-12461 ; Notice No. 02-11

SUBJECT: Delta Air Lines Comments on Proposed Rule "Flight Simulation Device Initial and Continuing Qualification and Use"

Delta Air Lines supports the FAA's initiative to update the FAR 121 Appendix H language. However, we disagree with the necessity to make the advisory language, which currently exists in Advisory Circulars for airplane simulators and flight training devices, regulatory. This advisory language is very lengthy and technically detailed. Making this advisory language regulatory would require both the FAA and the users to abide by a strict interpretation and also require a lengthy revision process for necessary changes to the technical requirements. Therefore, we recommend keeping the advisory language (eg the information in Appendices A,B,C and D to the proposed Part 60) as an Advisory Circular, or some similar non-regulatory document, referenced from the Part 60 Regulation.

Delta Air Lines also recommends that the current version of the proposed Part 60 Rule be withdrawn. Due to the large number of industry comments, revisions are necessary prior to finalizing a new rule. Differences between the pre-amble discussion in the NPRM and the Rule, as well as FAA comments made in the Virtual Public Forum, make it clear that the Rule in its current proposed form does not fulfill the intent of the FAA. Delta Air Lines recommends that the proposed Rule be revised with industry participation and then reissued for another comment period. We feel this is the only way to avoid serious unintended consequences for users and for the FAA. This would also provide an opportunity to define an improved revision process for the advisory material(proposed in the NPRM as Appendices to the Rule), and to incorporate harmonization with the ICAO Manual of Criteria for the Qualification of Flight Simulators. An international group of users and industry experts lead by the FAA and JAA expended significant efforts to develop these ICAO criteria which we feel should be incorporated in the FAA requirements.

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We have participated in and support the ATA STIG comments (Reference Docket items FAA-2002-12461-29,30,31,32,34,35,36,37). We concur with the recommendations and rationale made in the ATA letter Docket item FAA-02-12461-33,38. Additionally, we concur with the STIG position that the proposed Part 60 would cost considerably more than the FAA estimate. Though it is difficult to estimate a cost in light of the numerous changes that are likely to be made, Delta believes the estimate of \$18,000 per device per year is reasonable.

We believe that the addition of a mandatory Quality Assurance program will not meaningfully improve our simulators and will certainly increase costs. We don't feel that there are serious quality control issues presently, and do feel we provide the highest quality training. Mandating more paperwork and record keeping would provide minimal return for the additional cost.

Delta Air Lines specific comments on the proposed Part 60 follow. Some of these comments are similar to comments made by the ATA STIG, and these are cross-referenced to STIG comments where appropriate. Our comments are focused on the Rule and Appendix A. Where applicable the comments should be applied to the other Appendices as well.

In summary, Delta Air Lines recommends that the Part 60 NPRM be withdrawn and that a joint industry/FAA team be formed to draft language for a revised Regulation. We also propose that the team develop a method to keep detailed technical advisory language from being Regulatory. The results of this effort should then be published for public comment.

Thank you for your consideration.

If there are any questions regarding this submittal, please contact:

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Delta Air Lines Item 1		ATA STIG Reference Number:
NPRM Section / Paragraph Reference: preamble page 60298		
Suggested Change:		
Additional Comments:	The cost analysis refers to a letter from the MR to the manufacturer on a quarterly basis (in reference to 60.9 (b)(3)). The method nor timing of this is specified in 60.9. What is the substance of this letter, and what is it's specific purpose?	

Delta Air Lines Item 2		ATA STIG Reference Number: 22,28
NPRM Section / Paragraph Reference: Preamble discussion pg 60298-60300		
Suggested Change:		
Additional Comments:	Due to the many comments, and many likely changes/clarifications to the original Part 60 proposed language, as indicated by the public forum comments, we cannot complete an accurate evaluation of the true cost impact of the Rule. Our best judgement at this time is that the true costs are underestimated by the FAA.	

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Delta Air Lines Item 3		ATA STIG Reference Number:
NPRM Section / Paragraph Reference: 1.1-General definitions		
Suggested Change:	In the FTD definition, change ...”full size replica...” to “...realistic replica...”	
Additional Comments:		

Delta Air Lines Item 4		ATA STIG Reference Number: 29
NPRM Section / Paragraph Reference: 60.1		
Suggested Change:		
Additional Comments:	It should be clearly stated that Part 60 does not apply to non-FAA Qualified FSD's (eg CAPT, CPT) that are approved for use in our training program by the TPAA.	

Delta Air Lines Item 5		ATA STIG Reference Number: 35
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NPRM Section / Paragraph Reference: 60.5	
Suggested Change:	The preamble discussion references paragraph (d) as allowing for an appeal process. This is not stated in the rule. An appeal process should be specified in the Rule.
Additional Comments:	

Delta Air Lines Item 6	ATA STIG Reference Number: 40
NPRM Section / Paragraph Reference: 60.7 (b)(3)	
Suggested Change:	add (date 6 months after effective date of Rule) language to allow one to be a sponsor during the 6 month QA approval period.
Additional Comments:	

Delta Air Lines Item 7		ATA STIG Reference Number: 6,42
NPRM Section / Paragraph Reference: 60.7 (c)(1)		
Suggested Change:	Remove the 600 hour use requirement. The quarterly recurrent checks should be all that's required to maintain a FSD certification level.	
Additional Comments:	Especially in the current uncertain economic times, it would not be unlikely for a carrier to ground a fleet for over 2 years, but retain the FSD's for use when the fleet is resurrected. Language in 60.7 would restrict this, and it would appear to require a recertification under the new Part 60 requirements, which could be very costly.	

Delta Air Lines Item 8		ATA STIG Reference Number: 43
NPRM Section / Paragraph Reference: 60.7 (c) (3) (ii)		
Suggested Change:	remove the additional 12 calendar months before a sponsor could re-apply.	
Additional Comments:	What is the purpose of making a sponsor wait an additional 12 months to apply to sponsor a 'lapsed' FSD?	

Delta Air Lines Item 9	ATA STIG Reference Number:44
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<p>NPRM Section / Paragraph Reference: 60.9a</p>	<p>The FAA must provide some form of grounds for immediate inspections. This type of inspection can significantly impact scheduled training and a measure of just cause must be used to justify an unscheduled inspection.</p>
<p>Suggested Change:</p>	<p>Add language to define an approval process that will be used to protect operator schedules by requiring just cause to conduct this type of inspection.</p>

<p>Delta Air Lines Item 10</p>		<p>ATA STIG Reference Number: 7,45,46,48</p>
<p>NPRM Section / Paragraph Reference: 60.9 (b)</p>		
<p>Suggested Change:</p>	<p>Remove section (b) (1) and (2).</p>	
<p>Additional Comments:</p>	<p>Having to ‘take appropriate action’ on such wide ranging free lance comments could cost a considerable amount of time and result in many wild goose chases. Since the FSD’s are built and checked out using extensive substantiated data, and since a designated pilot checks out all phases of subjective criteria, it makes no sense to have to address a wide range of personal opinions. The aircraft logbook should be the mechanism used for legitimate comments/write-ups.</p>	

<p>Delta Air Lines Item 11</p>	<p>ATA STIG Reference Number:</p>
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<p>NPRM Section / Paragraph Reference: 60.9 b</p>	<p>Simulator Technicians currently enter discrepancies in the simulator logbook and should continue to enter discrepancies in the logbook.</p>
<p>Suggested Change:</p>	<p>Logs in addition to the simulator logbook should not be required.</p>
<p>Additional Comments:</p>	<p>This rule combined with 60.31 indicates the use of two “logbooks/entry formats”. The simulator logbook should meet all requirements.</p>

<p>Delta Air Lines Item 12</p>		<p>ATA STIG Reference Number:</p>
<p>NPRM Section / Paragraph Reference: 60.13 f</p>		
<p>Suggested Change:</p>	<p>This language should be revised to clarify which type of data revisions/additions require notification. We suggest that the language designate the data as “relevant to flight or ground dynamics, performance or handling characteristics or additional aircraft appliances.”</p>	
<p>Additional Comments:</p>	<p>The FAA will have to review all the letters sent to them by all the operators informing them that the simulator design data has changes. Design data encompasses all information provided by aircraft manufacturers and vendors.</p>	

<p>Delta Air Lines Item 13</p>	<p>ATA STIG Reference Number:</p>
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NPRM Section / Paragraph Reference: 60.11 (a)	
Suggested Change:	Re-word to make the sponsor’s responsibility limited to not knowingly allowing the FSD to be mis-used. Alternatively, remove this language and let 60.33 language apply.
Additional Comments:	The sponsor cannot ensure that, for example, a rental crew is not using a FSD for training for a system for which the FSD is not approved. That should be the user’s responsibility.

Delta Air Lines Item 14		ATA STIG Reference Number:
NPRM Section / Paragraph Reference: 60.11 (a)		
Suggested Change:	Include the words from the preamble “that other persons or certificate holders may arrange to use a sponsor’s FSD that is already qualified and approved for use within an approved flight training program without an additional qualification process”	
Additional Comments:	60.16 may already clarify this	

Delta Air Lines Item 15		ATA STIG Reference Number:
NPRM Section / Paragraph Reference: 60.11(b) (2)		
Suggested Change:	Change to: For all tasks and configurations approved in the sponsor's or user's FAA approved Flight Training Program	
Additional Comments:	An FSD shouldn't be required to have all features - just those for which training credits are desired.	

Delta Air Lines Item 16		ATA STIG Reference Number: 52
NPRM Section / Paragraph Reference: 60.11 (d)		
Suggested Change:	Re-word to state: The FAA recurrent checks will be conducted using the same software and active programming that normally functions during approved Flight Training. Alternatively use the language given in the preamble.	
Additional Comments:	As written, this would prevent any software changes. The Preamble comments indicate the intent is to ensure the recurrent FAA evals are conducted using the same software load as is used for training. Note that the software currently being used for training will not likely be the exact software that existed at the initial evaluation. The additional QPS requirements for configuration control, record keeping, approval and notification should be enough to authorize these differences.	

Delta Air Lines Item 17		ATA STIG Reference Number: 10,53-57
NPRM Section / Paragraph Reference: 60.13 (a)		
Suggested Change:	Re-word section to define what specific data is required to be submitted to the FAA.	
Additional Comments:	The request for 'all' data is too encompassing.	

Delta Air Lines Item 18		ATA STIG Reference Number: 53-57
NPRM Section / Paragraph Reference: 60.13 (f)		
Suggested Change:	Re-word language to address comments	
Additional Comments:	<p>Notification should only be required when the Sponsor determines the change affects the FSD in the context of 60.13 (a). Immediate notification is too vague. Above comment should govern, and language should state notification within 30 days of the sponsor determining the change will affect the FSD in the context of 60.13 (a).</p> <p>Note we feel it should be the Sponsor, not the NSPM, who is responsible for determining whether the change is required or not (again, governed by the context of 60.13 (a).)</p>	

Delta Air Lines Item 19		ATA STIG Reference Number: 53-57
NPRM Section / Paragraph Reference: 60.13 f	Requires operators to inform the FAA of all revisions to the simulator design or reference data.	
Suggested Change:	This language should be revised to clarify which type of data revisions/additions require notification. We suggest that the language designate the data as “relevant to flight or ground dynamics, performance or handling characteristics or additional aircraft appliances.”	
Additional Comments:	The FAA will have to review all the letters sent to them by all the operators informing them that the simulator design data has changes. Design data encompasses all information provided by aircraft manufacturers and vendors.	

Delta Air Lines Item 20	ATA STIG Reference Number:
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<p>NPRM Section / Paragraph Reference: 60.15</p>	
<p>Suggested Change:</p>	<p>Delete the requirement for ‘all equipment and appliances’ and use the Statement of Qualification to indicate the equipment and appliances that cannot be used for training (because they are not installed).</p>
<p>Additional Comments:</p>	<p>There is an inherent contradiction in stating that the FSD meets all requirements of Part 60, which requires ALL ‘equipment and appliances’ be installed, and the Statement of Qualification, which gives the ability to indicate systems that the FSD is not approved to be used for training. It often is the case that certain equipment and appliances that are on the airplane are not needed on the FSD, because training is accomplished in a manner other than by using the FSD. Operators should have this option, as it can be a major cost issue. Also, the differences between specific tail numbers and general aircraft series, could make it difficult to determine what the complete set of equipment and appliances that apply actually are.</p> <p>Approval of the training syllabus should be handled between the Flight Training department and the TPAA. We don’t believe the NSPM should require equipment and appliances on a simulator that will not be used.</p>

<p>Delta Air Lines Item 21</p>	<p>ATA STIG Reference Number: 59</p>
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NPRM Section / Paragraph Reference: 60.15 (b)(2)	
Suggested Change:	remove the requirement for a description of the procedure.
Additional Comments:	This is redundant with requirements of the QA.

Delta Air Lines Item 22		ATA STIG Reference Number: 59A
NPRM Section / Paragraph Reference: 60.15 (b)(3)		
Suggested Change:		
Additional Comments:	We agree with the ATA STIG comment 59A that 'equivalent', 'equivalently' and 'conforms' are too stringent to expect a pilot to sign up to, particularly on maneuvers he probably has never performed in an aircraft. The objective check out tests validate the model implementation, and the pilot is verifying the flight characteristics and system performance represent the aircraft to the best of his ability to judge.	

Delta Air Lines Item 23		ATA STIG Reference Number:
NPRM Section / Paragraph Reference: 60.15 (b)(4)		
Suggested Change:		
Additional Comments:	does this mean the FAA will compile a list of the possible tasks and systems? A single source is needed for standardization.	

Delta Air Lines Item 24		ATA STIG Reference Number: 60
NPRM Section / Paragraph Reference: 60.15 (b)(3)		
Suggested Change:	Change the requirement for a signed statement by a pilot to be sent to the NSPM 3 days before the evaluation.	
Additional Comments:	Since the request for evaluation must be made at least a month in advance, it often is the case that all the subjective cases haven't yet been flown by the pilot. Thus he cannot sign that they have been checked. Otherwise, the FSD would have to be completely ready at least a month before the evaluation, which would add cost by having a ready to go device sitting unused.	

Delta Air Lines Item 25		ATA STIG Reference Number:
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NPRM Section / Paragraph Reference: 60.13 (f)	Requires operators to inform the FAA of all revisions to the simulator design or reference data.
Suggested Change:	This language should be revised to clarify which type of data revisions/additions require notification. We suggest that the language designate the data as “relevant to flight or ground dynamics, performance or handling characteristics or additional aircraft appliances.”
Additional Comments:	The FAA will have to review all the letters sent to them by all the operators informing them that the simulator design data has changes. Design data encompasses all information provided by aircraft manufacturers and vendors.

Delta Air Lines Item 26	ATA STIG Reference Number: 64
NPRM Section / Paragraph Reference: 60.15 (d)	This wording will make it difficult to use retired contract personnel for simulator requirements testing
Suggested Change:	Text should be added to allow the sponsor to use retired pilots to checkout the simulators.
Additional Comments:	Flight Training will have to provide qualified pilots for checkout in lieu of using contract personnel.

Delta Air Lines Item 27	ATA STIG Reference Number:
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NPRM Section / Paragraph Reference:	Deleted
Suggested Change:	
Additional Comments:	

Delta Air Lines Item 28	ATA STIG Reference Number:
NPRM Section / Paragraph Reference: 60.15h	Does the updated QTG need to be completed prior to the issuance of the Statement of Qualification?
Suggested Change:	Clarification required.
Additional Comments:	

Delta Air Lines Item 29	ATA STIG Reference Number: 12,66,69
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NPRM Section / Paragraph Reference: 60.16	
Suggested Change:	Add language to this section clearly stating that additional qualifications will continue to be qualified under grandfather provisions, and will not require meeting the new part 60 requirements as long as the original qualification was completed prior to issuance of Part 60.
Additional Comments:	This section does not state that the additional qualification would be conducted under the original qualification guidelines for that device (eg continued to be grandfathered for the additional qualifications. There is a concern that Part 60 requirements could be invoked for additional qualifications.

Delta Air Lines Item 30		ATA STIG Reference Number:
NPRM Section / Paragraph Reference: 60.17 (a)		
Suggested Change:	Specify the 'other applicable provisions'. Possibly the QPS would be the appropriate place for this.	
Additional Comments:	The last sentence 'The sponsor of such an FSD must comply with the other applicable provisions of this part' is rather vague and subject to mis-interpretation. The preamble mentions 'use requirements', which again is not specific enough.	

Delta Air Lines Item 31		ATA STIG Reference Number:
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NPRM Section / Paragraph Reference:	
Suggested Change: 60.17(a)	Clarify for the case of grandfathered FSD's.
Additional Comments:	If the 'other applicable provisions' of this section include maintaining a copy of the initial qualification software, records of all changes since the initial qual, and initial qual test results, as stated in 60.31(2) and (3), this data may not exist especially for FSD's which have been upgraded.

Delta Air Lines Item 32		ATA STIG Reference Number:
NPRM Section / Paragraph Reference: 60.17 (b)		
Suggested Change:	Define Configuration List	
Additional Comments:	Configuration List does not seem to be defined anywhere.	

Delta Air Lines Item 33	ATA STIG Reference Number: 12,66,69
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NPRM Section / Paragraph Reference: 60.17 (b)	
Suggested Change:	
Additional Comments:	To obtain a Statement of Qualification, does a new full initial evaluation need to be accomplished?

Delta Air Lines Item 34		ATA STIG Reference Number: 12,66,69
NPRM Section / Paragraph Reference: 60.17 b	The FAA has up to six years to issue a Statement of Qualification for FSDs qualified prior to the effective date of the final Part 60 rule. The FSD may not be used without the Statement of Qualification after the date 6 years from the final Part 60 rule.	
Suggested Change:	Why is it necessary to allow 6 years for this process? We recommend that six years be changed to one year. This means that the Statement of Qualification will be completed on the first recurrent following the final Part 60 rule.	
Additional Comments:		

Delta Air Lines Item 35		ATA STIG Reference Number:
NPRM Section / Paragraph Reference: 60.19		
Suggested Change:	Remove the 600 hour minimum use requirement from other sections of Part 60. (Section 60.7 c (1))	
Additional Comments:	<p>This section omits reference to the 600 hour minimum use requirement. We believe the section 60.19 as written (additional minor comments considered) should be all that is required to maintain the certification of a FSD (eg regardless of how much the device is used in actual training).</p> <p>The first paragraph in the preamble for this section also states:” Proposed Sec. 60.19 contains the specific requirements for conducting periodic inspections and evaluations and for maintaining FSD's. These requirements are necessary to ensure that the FSD continues to meet the standards under which it was originally qualified, so that any training, evaluation, and flight experience conducted in the FSD is reliable and adequate for meeting the objectives of the approved training program under which they occur.”</p> <p>Note there is no mention of the 600 hour minimum use.</p>	

Delta Air Lines Item 36		ATA STIG Reference Number: 73
NPRM Section / Paragraph Reference: 60.19 a 1	FAA has to approve the quarterly checks. This is redundant in that the recurrent checks will be part of the QA process that the FAA has already approved.	
Suggested Change:	Sponsor is professional enough to break down quarterly checks and have approved through the QA process.	
Additional Comments:	Delta maintenance costs increase.	

Delta Air Lines Item 37		ATA STIG Reference Number: 13,74,75
NPRM Section / Paragraph Reference: 60.19 (a) (2) and (3)		
Suggested Change:	Re-word (2) accordingly, and delete (3).	
Additional Comments:	A preflight once in each 24 hour period, or once prior to actual use of the FSD (if it hasn't been used in over 24 hours) should be adequate for preflight requirement.	

Delta Air Lines Item 38		ATA STIG Reference Number: 80
NPRM Section / Paragraph Reference: 60.19 b(4)	FAA determines recurrent frequency.	
Suggested Change:	Approval Level and technology should dictate recurrent schedule. This is normally done no more frequently than once a year. With an approved QA program, this frequency should be reduced further.	
Additional Comments:	FAA has blank check to evaluate whenever they want. Delta maintenance cost increase.	

Delta Air Lines Item 39	ATA STIG Reference Number:
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NPRM Section / Paragraph Reference: 60.19 (c)	
Suggested Change:	Please clarify
Additional Comments:	60.19 (c) refers back to section 60.15 (b). There is a possible interpretation from this reference that a qualified pilot would be required to sign off on each recurrent and on each change made to the FSD. This is not the normal current industry procedure. We do not believe a pilot's input should be required unless a change is made that affects handling qualities, etc (thus requiring NSPM notification, etc).

Delta Air Lines Item 40		ATA STIG Reference Number:
NPRM Section / Paragraph Reference: 60.20		
Suggested Change:	The Rule should only require discrepancy log write-ups for items which would adversely affect training or which indicate a conflict with the Statement of Qualification. (Note that this wouldn't prevent any additional write-ups - at the user's discretion).	
Additional Comments:	Taken literally, this would mean anything missing or not working would have to be written up whether it affected training or not. This could be taken to mean equipment or appliances not simulated (and so noted on the Statement of Qualification) would still have to be written up every time.	

Delta Air Lines Item 41	ATA STIG Reference Number:
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NPRM Section / Paragraph Reference:	Deleted
Suggested Change:	
Additional Comments:	

Delta Air Lines Item 42	ATA STIG Reference Number: 82
NPRM Section / Paragraph Reference: 60.21 (c)	Final flight data package not available in most cases within a year of initial approval.
Suggested Change:	Rewrite to address time frame in regard to final data package release then sim manufacture update schedule across industry.
Additional Comments:	FAA puts unrealistic time line on implementation of final data package. Delta cost increase due to reliance on manufacture to update.

Delta Air Lines Item 43	ATA STIG Reference Number:
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NPRM Section / Paragraph Reference: 60.21 (d)	This rule is redundant. The proof that the simulator continues to perform and handled as qualified is recorded as part of the recurrent evaluation process.
Suggested Change:	This rule should be removed
Additional Comments:	Under the rule as written we would have additional correspondence to the FAA. The FAA will be inundated with more paperwork from all the operators

Delta Air Lines Item 44		ATA STIG Reference Number:
NPRM Section / Paragraph Reference: 60.23 (a)		
Suggested Change:	Re word (a) : When the sponsor determines that any of the following circumstances exist and determines that, for a required or approved training event , the FSD cannot be used adequately to train, evaluate or provide flight experience for flight crew members, the sponsor must modify the FSD accordingly.	
Additional Comments:	It is not clear why reference to the FAA is included in (a), since the FAA has the prerogative of issuing Directives, as noted in 60.23 (b). The responsibility for determining whether a FSD requires modification due to one of the items mentioned in (a) should lie with the sponsor. Also, the determination in (a) of FSD not being adequate should normally refer to a specific training event (vs the entire FSD suddenly being unusable).	

Delta Air Lines Item 45	ATA STIG Reference Number:
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<p>NPRM Section / Paragraph Reference: 60.23 a</p>	<p>This paragraph requires that we modify the simulator for every simulator design or reference data change. This, in many cases, will add negligible value to the flight training experience.</p>
<p>Suggested Change:</p>	<p>This section should be updated to indicate which modifications would require FAA notification and FAA approval. We suggest that the language designate the changes requiring FAA notification and approval as “relevant to flight or ground dynamics, performance or handling characteristics or additional aircraft appliances.”</p>
<p>Additional Comments:</p>	<p>Support costs will increase significantly due to the requirement for implementing all changes to the simulator design or reference data. We currently do not modify the simulators in accordance with all the data updates because many updates do not impact flight training.</p>

<p>Delta Air Lines Item 46</p>		<p>ATA STIG Reference Number:</p>
<p>NPRM Section / Paragraph Reference: 60.23 (a) (2)</p>		
<p>Suggested Change:</p>	<p>change wording to say ‘A significant change...’</p>	
<p>Additional Comments:</p>	<p>Data changes are sometimes judged to be of no training value and thus are not incorporated.</p>	

<p>Delta Air Lines Item 47</p>	<p>ATA STIG Reference Number:</p>
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NPRM Section / Paragraph Reference: 60.23 (a) (4)	
Suggested Change:	Clarify and add an appeals process.
Additional Comments:	“Other circumstances..” is a vague statement. There should at least be a defined appeals process .

Delta Air Lines Item 48		ATA STIG Reference Number: 163
NPRM Section / Paragraph Reference: 60.23 (c)		
Suggested Change:	define the specifics of which modifications require notification.	
Additional Comments:	‘modifying’ is subject to a wide range of interpretation. This should be stated so as to restrict to items such as those affecting handling qualities, ground handling, etc. It should clearly exempt routine modifications that do not alter the Statement of Qualification or the approved training syllabus. Reference items 100,100A as well.	

Delta Air Lines Item 49		ATA STIG Reference Number:
NPRM Section / Paragraph Reference: 60.23 (c)(1)		
Suggested Change:	Remove the requirement for a description of operational and engineering effect.	
Additional Comments:	It doesn't seem that the 'operational and engineering effect' of a change should normally be subject to FAA oversight. It is not clear what 'engineering effect' actually means.	

Delta Air Lines Item 50		ATA STIG Reference Number:
NPRM Section / Paragraph Reference: 60.23(d)		
Suggested Change:	Re-word accordingly	
Additional Comments:	The addition of additional equipment or devices intended to simulate aircraft appliances (eg cargo smoke detection) should not normally require NSPM notification. The TPAA should be allowed to approve and update the Statement of Qualification to allow additional training credits. Also, the literal interpretation of this paragraph is too all encompassing .	

Delta Air Lines Item 51		ATA STIG Reference Number:
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NPRM Section / Paragraph Reference: 60.23(e)	
Suggested Change:	Clearly and specifically define what modifications this really applies to .
Additional Comments:	Again, 'modify' must be specifically defined.

Delta Air Lines Item 52		ATA STIG Reference Number:
NPRM Section / Paragraph Reference: 60.23 (f)		
Suggested Change:	Add language to make this requirement only for the 30 days following completion of the modification. (Note: the Statement of Qualification would normally cover any significant updates, and this would be available to the users at all times).	
Additional Comments:	The aircraft logbook (and in some cases the updated Statement of Qualification) would be the normal way to convey this information. Since the logbook is normally kept in the FSD for only 30 days, this notification should be limited to notification of a user of the FSD within 30 days of the modification.	

Delta Air Lines Item 53		ATA STIG Reference Number:
NPRM Section / Paragraph Reference: 60.23(d)(2)		
Suggested Change:	Clarify intent	
Additional Comments:	This could be interpreted to mean a requirement of an initial evaluation...under the new rules of Part 60, instead of the grandfathered conditions. This would conflict with the upgrade/update philosophy which would retain grandfather rights for updates.	

Delta Air Lines Item 54		ATA STIG Reference Number: 97
NPRM Section / Paragraph Reference: 60.25 (b)		
Suggested Change:	Remove the 7 day time limit.	
Additional Comments:	There should be no time limit imposed for repair or replacement. The fact that the FSD would be restricted from use for accomplishing a portion of it's intended use is motivation enough for the sponsor to make the repair as soon as possible.	

Delta Air Lines Item 55		ATA STIG Reference Number:
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NPRM Section / Paragraph Reference:	Deleted
Suggested Change:	
Additional Comments:	

Delta Air Lines Item 56	ATA STIG Reference Number:
NPRM Section / Paragraph Reference: 60.25 b	Appendix A 18b gives us 30 days to replace a failed component, however, Rule section 60.25 on page 60308 only gives us 7 days.
Suggested Change:	Remove time limit.
Additional Comments:	Simulators may become grounded more frequently causing training interruptions. Reference item 54

Delta Air Lines Item 57	ATA STIG Reference Number: 98
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NPRM Section / Paragraph Reference: 60.25 (b)	
Suggested Change:	
Additional Comments:	<p>The preamble section indicates this section would apply to ‘all other components’ of the FSD (not just those affecting training). This language is not in the Rule, and should not be in the intent of the Rule. There are many components an a FSD that would be entirely transparent to any flight training scenario even if they were not working.</p>

Delta Air Lines Item 58		ATA STIG Reference Number: 102
NPRM Section / Paragraph Reference: 60.27 a (4)	There are many updates that are done in which the simulator is made unusable for several days (i.e. HUD). Under this rule we would loose our qualification.	
Suggested Change:	A 30-60 day window needs to be added to this rule to allow for the simulator to be modified without loosing its qualification.	
Additional Comments:	A simulator could loose its qualification during update	

Delta Air Lines Item 59	ATA STIG Reference Number:
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NPRM Section / Paragraph Reference: 60.29 a (2)	
Suggested Change:	Change 7 days to 30 days.
Additional Comments:	It appears 30 days would be more appropriate considering the other references to 30 days in Section 60.29. Emergency considerations would obviously override this, and it appears language exists to allow this.

Delta Air Lines Item 60		ATA STIG Reference Number: 108-115
NPRM Section / Paragraph Reference: 60.31 (a)(2) and (3)(i)		
Suggested Change:	Remove requirement for keeping programming from initial qualification for an upgraded FSD, remove requirement to maintain copy of all programming changes made from initial for an upgraded FSD, and remove requirement for maintaining the initial test results for an upgraded FSD.	
Additional Comments:	Since an upgrade results in effect an initial certification, what purpose is served by keeping the programming and test results from a superceded upgrade? Also, the language of 60.17(a) indicates that after 6 years this initial software, recordkeeping and test results would be required to exist from the initial qualification of the FSD. This is not practical in all cases, as for older FSD's, the data doesn't presently exist in all cases. The preamble comments indicate this suggested clarification is the FAA's intent.	

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Delta Air Lines Item 61		ATA STIG Reference Number:
NPRM Section / Paragraph Reference:	Deleted	
Suggested Change:		

Delta Air Lines Item 62		ATA STIG Reference Number:
NPRM Section / Paragraph Reference: 60.31 (a) (3) (iv)		
Suggested Change:	Delete this paragraph.	
Additional Comments:	(reference comments in item 10)	

Delta Air Lines Item 63		ATA STIG Reference Number:
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NPRM Section / Paragraph Reference: 60.31(a) (5)	
Suggested Change:	re-word to say ‘initial or upgrade qualification.’
Additional Comments:	Wording should be clarified to cover upgrade situation (which in effect is a new ‘initial’ qualification). The preamble comments indicate this was the FAA’s intent.

Delta Air Lines Item 64	ATA STIG Reference Number: 108-115
NPRM Section / Paragraph Reference: 60.31(b)	
Suggested Change:	Delete paragraph (b).
Additional Comments:	It is not clear what purpose this will serve anyone, especially what use is this information to the NSPM? Some certificate holders who use the FSD are not under FAA NSPM oversight (eg foreign carriers not seeking FAA credits).

Delta Air Lines Item 65	ATA STIG Reference Number: 108-115
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NPRM Section / Paragraph Reference: 60.31(d)	
Suggested Change:	Delete paragraph (d).
Additional Comments:	This appears to be a redundant requirement. The provisions of 60.19 adequately cover the requirement to keep the FSD operating at the qualification level on a daily basis.

Delta Air Lines Item 66		ATA STIG Reference Number:
NPRM Section / Paragraph Reference:		
Suggested Change:	Deleted	
Additional Comments:		

Delta Air Lines Item 67	ATA STIG Reference Number: 116
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NPRM Section / Paragraph Reference: 60.33	
Suggested Change:	Clarify FAA's intent
Additional Comments:	As written, this section appears to place documentation of FSD items on a par with Aircraft Records. If so, this would appear to be overkill. There is no evidence that FSD's should require the same level of rigorous record keeping as do aircraft. This level of recording would require extra manpower to track, follow-up, do accuracy checks and audit, particularly in light of the possible penalties for even inadvertent omissions or mistakes.

Delta Air Lines Item 68		ATA STIG Reference Number:
NPRM Section / Paragraph Reference:	Deleted	
Suggested Change:		
Additional Comments:		

Delta Air Lines Item 69		ATA STIG Reference Number: 116
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NPRM Section / Paragraph Reference: 60.33 (c)	
Suggested Change:	Incorporate language such as ‘intentionally false statement’ or ‘fraudulent or intentionally false statement’ as part of this section.
Additional Comments:	Taken literally, this section provides zero tolerance for honest mistakes. Paragraph (a) refers to fraudulent or intentionally false statements, for which there should be zero tolerance. Paragraph (c) refers to incorrect statements. This encompasses honest mistakes, for which there should be some redress on a case by case basis.

Delta Air Lines Item 70	ATA STIG Reference Number:
NPRM Section / Paragraph Reference:	Deleted
Suggested Change:	
Additional Comments:	

Delta Air Lines Item 71	ATA STIG Reference Number: 118
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NPRM Section / Paragraph Reference: 60.35 (a)	
Suggested Change:	Remove the requirement for simulating ‘all equipment and appliances’. State that the Statement of Qualification will indicate non-simulated systems for which training credit cannot be obtained.
Additional Comments:	<p>The sponsor should have the discretion of deciding what equipment and appliances should be simulated in an FSD. Having to add ‘all’ such systems adds a significant cost burden to an FSD, for no benefit. The Statement of Qualification appears to be intended to document what systems are not included, and thus not eligible for training credits.</p> <p>Additionally, many fleets of an aircraft series have slightly different configurations between specific aircraft tail numbers. This could create a situation where one sponsor has a simulator representing a generic series configuration, having a minimum amount of equipment and appliances simulated, and another sponsor having one that represents a specific tail number, having to simulate ‘all’ equipment and appliances, thus adding extra cost to the second sponsor for the same qualification level of simulation.</p>

Delta Air Lines Item 72	ATA STIG Reference Number:
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NPRM Section / Paragraph Reference: 60.35(b)	
Suggested Change:	Define specific performance criteria for which this applies; Move language to QPS .
Additional Comments:	'...perform satisfactorily...' is a vague term subject to a wide range of subjective interpretation. Specifics should be defined. Also, this would appear to be information more suited for the QPS vs the Rule.

Delta Air Lines Item 73		ATA STIG Reference Number: 119
NPRM Section / Paragraph Reference: 60.35 (b)		
Suggested Change:	Add wording that a Level A simulator can be downgraded to a Level 6 FTD without the need for an additional evaluation.	
Additional Comments:	Shouldn't it be stated that a level A device can be downgraded to a level 6 FTD without having to undergo an additional evaluation? (Perhaps this is better suited for QPS language)	

Delta Air Lines Item 74	ATA STIG Reference Number:
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<p>NPRM Section / Paragraph Reference: 60.35 (a) and 60.17(d)</p>	
<p>Suggested Change:</p>	<p>Change 18 months to 2 years in 60.35 (a) Add exclusionary language in 60.17(d) for this circumstance.</p>
<p>Additional Comments:</p>	<p>The preamble mentions that a sponsor would have 2 years to upgrade a Level A simulator to a Level B. The language of 60.35(a) would allow only 18 months unless the sponsor upgraded under the new Part 60 requirements, which likely would be impossible for an old aircraft type. Paragraph 60.17(d) indicates that any upgrade after the effective date of the Rule would have to meet the new Rule requirements, thus allowing no time for a Level B upgrade after the Rule is effective.</p>

<p>Delta Air Lines Item 75 - deleted</p>	<p>ATA STIG Reference Number:</p>
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<p>Delta Air Lines Item 76</p>	<p>ATA STIG Reference Number: 124</p>
<p>NPRM Section / Paragraph Reference: App A</p>	
<p>Suggested Change:</p>	<p>Remove repeat of Rule language from Appendix</p>
<p>Additional Comments:</p>	<p>We believe it will reduce the chance of misinterpretation if the Rule language repeat is removed from the Appendix sections.</p>

Delta Air Lines Item 77		ATA STIG Reference Number:
NPRM Section / Paragraph Reference: App A 1 a and 1 b (3)		
Suggested Change:	Clarify the difference between ‘directive’ and ‘regulatory’	
Additional Comments:	App A Introduction section 1 a states that the appendix contains ‘information that is either directive or guiding in nature’. App A Introduction 1 b (3) (and other areas of Part 60) states that the QPS is regulatory. Clarification of these terms and their effect is requested. It is not clear why any of the Appendix should be Regulatory.	

Delta Air Lines Item 78		ATA STIG Reference Number: 125,126
NPRM Section / Paragraph Reference: App A 4.c		
Suggested Change:		
Additional Comments:	Is it true that the appendix matches the latest ICAO requirements for level C and D simulators? We think an update to the Appendix is required to match the latest ICAO requirements (which haven’t yet been formally published).	

Delta Air Lines Item 79		ATA STIG Reference Number: 133
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NPRM Section / Paragraph Reference: App A 5.f (8)	
Suggested Change:	
Additional Comments:	It would seem that since the TPAA and NSPM are both within the FAA, it would be more practical for the FAA to handle this informing, vs the sponsor.

Delta Air Lines Item 80	ATA STIG Reference Number:
NPRM Section / Paragraph Reference: App A 5.f (10)	
Suggested Change:	Add clarifying language
Additional Comments:	Discrepancies should only be required to be written if the discrepancy interferes with training or is in conflict with the Statement of Qualification.

Delta Air Lines Item 81	ATA STIG Reference Number:
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NPRM Section / Paragraph Reference: App A 5.f (10)	
Suggested Change:	
Additional Comments:	“The method to ensure...” implies there is a way to prevent human error entirely. This is not practical. What does the FAA consider an acceptable method for this in their simulator QA program?

Delta Air Lines Item 82	ATA STIG Reference Number:
NPRM Section / Paragraph Reference: App A 5.f (10)	
Suggested Change:	Remove reference to NASIP, and revise Rule to specifically exclude such type inspections.
Additional Comments:	With Part 60 as a Rule, and the QA program required, sponsors should not be subject to inspections by multiple agencies within the FAA. The NSPM and TPAA would provide adequate oversight.

Delta Air Lines Item 83	ATA STIG Reference Number: 45,139
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NPRM Section / Paragraph Reference: App A 5.f (19)	
Suggested Change:	Remove item (18)
Additional Comments:	Reference comments 10 (Rule section 60.9(b)), item 83 and STIG comment 45 and 139.

Delta Air Lines Item 84	ATA STIG Reference Number: 45,139
NPRM Section / Paragraph Reference: App A 7.b	
Suggested Change:	Remove requirement for acting on ad lib comments, and restrict action requirement to logbook entries.
Additional Comments:	Again, reference comment 10 and 83 and STIG comment 45 and 139.

Delta Air Lines Item 85	ATA STIG Reference Number:
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<p>NPRM Section / Paragraph Reference:</p> <p>App A 9.a</p>	<p>This section requires submission of aircraft flight test data for FAA approval, which is not currently done.</p>
<p>Suggested Change:</p>	<p>Language needs to be added so that the agreed aircraft flight test data will be the reference data for simulator initial qualification and that any additional data requirements that are imposed by the FAA will not jeopardize the initial qualification of the simulator.</p>
<p>Additional Comments:</p>	<p>A flight test data report will have to be prepared and submitted to the FAA separate from the QTG. This will be a controlled document that will have to be updated as data updates are provided by the aircraft manufacturer.</p>

<p>Delta Air Lines Item 86</p>		<p>ATA STIG Reference Number:</p>
<p>NPRM Section / Paragraph Reference:</p> <p>App A 9.j</p>		
<p>Suggested Change:</p>		
<p>Additional Comments:</p>	<p>Often the data has been generated by the aircraft manufacturer well in advance of a sponsor deciding to acquire a FSD. Thus, having the NSP review flight test plans would be out of the control of a sponsor. How does the FAA envision this review taking place? Does the aircraft manufacturer have to get NSP approval of the data gathering technique and of the data package prior to it's use in building a FSD?</p>	

Delta Air Lines Item 87		ATA STIG Reference Number:
NPRM Section / Paragraph Reference: App A 9j	It is unclear if the requirement for review by the NSP staff of the aircraft flight test plan is for additional/supplemental data requirements or for the entire test flight program (as in the case of a new aircraft). Clarification required.	
Suggested Change:		
Additional Comments:		

Delta Air Lines Item 88		ATA STIG Reference Number:
NPRM Section / Paragraph Reference: App A 11		
Suggested Change:		
Additional Comments:	Note that the Rule language restatement is significantly different from the actual Rule 60.15. A previous comment suggested removing the Rule restatement from the Appendix.	

Delta Air Lines Item 89	ATA STIG Reference Number:
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NPRM Section / Paragraph Reference: App A 11.i and k	
Suggested Change:	
Additional Comments:	note that reference to 11.b(4) appears to be in error.

Delta Air Lines Item 90	ATA STIG Reference Number:
NPRM Section / Paragraph Reference: App A 11.k(2)	
Suggested Change:	
Additional Comments:	Note that the reference to Att 5 Figure 4 should refer to Figure 5.

Delta Air Lines Item 91	ATA STIG Reference Number:
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<p>NPRM Section / Paragraph Reference: App A 11.k</p>	
<p>Suggested Change:</p>	<p>State that for previously qualified FSD's, the existing MQTG is grandfathered and does not have to be updated to the new QPS standards.</p>
<p>Additional Comments:</p>	<p>Rule paragraph 60.17 (a) states that 'The sponsor of such an FSD must comply with other applicable provisions of this part'. Current MQTG's do not have all the sections described in the QPS. It is not clear that the MQTG would not have to be updated to the new requirements.</p>

<p>Delta Air Lines Item 92</p>		<p>ATA STIG Reference Number: 147</p>
<p>NPRM Section / Paragraph Reference: App A 11.k (6)</p>		
<p>Suggested Change:</p>	<p>More specifically describe what source data is required.</p>	
<p>Additional Comments:</p>	<p>"The source data" is vague and subject to mis-interpretation.</p>	

Delta Air Lines Item 93		ATA STIG Reference Number:
NPRM Section / Paragraph Reference: App A 11.m		
Suggested Change:	Clarify the language to allow for submission of the QTG prior to completing all final checkout of the FSD.	
Additional Comments:	This paragraph indicates the QTG can be submitted prior to full FSD checkout. Rule section 60.15 contradicts this, stating that application must include a statement that the FSD meets all QPS requirements.	

Delta Air Lines Item 94		ATA STIG Reference Number:
NPRM Section / Paragraph Reference: App A 11.o		
Suggested Change:	Delete section o.	
Additional Comments:	The requirement for an electronic copy of the MQTG would result in an expensive operation. A sponsor would derive little or no value from such, and it is not clear that it would be of any significant use to the NSPM. Even new FSD QTG's are not produced in completely electronic form, and even for a new device this requirement would add an expense and return little or no value.	

Delta Air Lines Item 95		ATA STIG Reference Number:
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NPRM Section / Paragraph Reference: App A 11.r	
Suggested Change:	Define the process for “this early process” in the QPS.
Additional Comments:	“this early process” is not outlined anywhere in the Rule or QPS. It is assumed it is similar to the current practice, however the procedure should be outlined in the QPS.

Delta Air Lines Item 96	ATA STIG Reference Number: 146A
NPRM Section / Paragraph Reference: App A 11.s	For convertible simulators the qualification for variants should be a supplemental qualification only focusing on the differences between the originally qualified aircraft and the variant provided the aircraft are all in the same series. The QTG for the variant aircraft should be added as an appendix containing only the different tests required to validate the differences between the originally qualified simulator and the variant. This is a valid method because, in many cases, QTGs already contain tests from several aircraft variants.
Suggested Change:	This section should be updated to allow supplemental qualifications for simulator variants of the same series aircraft as opposed to a full qualification and separate QTG.
Additional Comments:	This proposed section would double the initial and recurrent qualification workload due to the fact that two separate QTG’s and two separate evaluations would be required.

Delta Air Lines Item 97		ATA STIG Reference Number: 156
NPRM Section / Paragraph Reference: App A 14 (1-4)	Technician Preflight should include takeoff procedures with Autopilot and FMS. Technicians are currently required to perform a complete takeoff through landing with entered routes. Note: Preflight will require at least 40 minutes.	
Suggested Change:	Delete specific detailed requirement for pre-flight.	
Additional Comments:		

Delta Air Lines Item 98		ATA STIG Reference Number: 158
NPRM Section / Paragraph Reference: App A 14.f		
Suggested Change:	clarify reference. Reduce the time to 4 hours.	
Additional Comments:	Note that section 13.a(7) referenced in this section does not exist. Also, Recurrent checks normally take 4 hours of FSD time currently. This would double the time (and thus the cost) for each recurrent check.	

Delta Air Lines Item 99	ATA STIG Reference Number: 99
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<p>NPRM Section / Paragraph Reference: App A 14.d</p>	
<p>Suggested Change:</p>	<p>Modify language to allow some flexibility, such as saying ‘should consist of the following general procedures’ for section 14.d.</p>
<p>Additional Comments:</p>	<p>Specifying details of the pre-flight, and requiring they “must” consist of these specifics, does not allow flexibility or discretion on how we do pre-flights. For example, d.4.(e) requires selecting takeoff position. What if we taxied to this position (that would violate the “must” requirement). D.4.(g) requires selecting a final approach reposition. What if we preferred to fly to that position? D.4.(j) requires ‘turn off main power supply’. This does not make sense.</p>

<p>Delta Air Lines Item 100</p>	<p>ATA STIG Reference Number:</p>
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NPRM Section / Paragraph Reference: App A 17.h	
Suggested Change:	Define the specific types of modifications for which this notification is required.
Additional Comments:	This notification should only be required for selected types of modifications. Also reference comment 48.
Delta Air Lines Item 100A	ATA STIG Reference Number: 163
NPRM Section / Paragraph Reference: App A 17.h	A qualified Delta pilot will have to sign the letter to the FAA indicating the modification is per aircraft.
Suggested Change:	This should only be required for changes that are “relevant to flight or ground dynamics, performance or handling characteristics or additional aircraft appliances.”.
Additional Comments:	Support costs will increase because every change will have to be approved by flight training.

Delta Air Lines Item 101		ATA STIG Reference Number: 171
NPRM Section / Paragraph Reference: Attachment 1 section 1.a(2)(a) (page 60319,60320)		
Suggested Change:	Modify QPS paragraph to correlate with item 7.m. This should make it clear that a models accuracy and level of detail is only required to be to the extent of what is required to satisfy the training of the sponsors TPAA approved syllabus.	
Additional Comments:	<p>Visual model requirements should only require items that are to be used in the TPAA approved training syllabus. Full blown models of entire airports should not be required for any model unless it is deemed required to accomplish the training. Specific areas of certain airports are used differently by different airlines. Some areas of airports are never used operationally by specific airlines, and should not be required in a visual model. Real world updates should only be required to be updated in models when it would adversely affect the approved training syllabus if not updated.</p> <p>Note that Attachment item 7.m, which requires a minimum of 3 airport scenes, specifies only “ramps and buildings that corresponds to the sponsor’s Line Oriented scenarios. This also would support eliminating the existing requirement of 3 full blown visual models. This requirement makes no real sense in the context of modern visual systems on Level C and D simulators.</p>	

Delta Air Lines Item 102	ATA STIG Reference Number:
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NPRM Section / Paragraph Reference: App A Att 1 3.c	This rule now requires that the software be updated in 6 months instead of “timely update” referenced in AC120-40C
Suggested Change:	The 6 month requirement should be removed because in the case of some updates may take more than 6 months to develop. The 6 months should be changed back to “timely update”
Additional Comments:	Engineering will be under more pressure to keep up with updates. Increase of engineering staff will be required or we will have to spend more money to purchase updates. Increase in costs to maintain the simulator

Delta Air Lines Item 103	ATA STIG Reference Number:
NPRM Section / Paragraph Reference: A Attach 1 3 h	This requires automatic testing for all level C and D simulators which is a new requirement.
Suggested Change:	This paragraph needs to allow for the grandfathering of pre part 60 testing systems for upgrade qualification. The requirement for automated tests should be for all tests where appropriate and there is sufficient supporting data for an autotest.
Additional Comments:	This rule would increase the costs of upgrading simulators.

Delta Air Lines Item 104	ATA STIG Reference Number:
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NPRM Section / Paragraph Reference: A Attach 1 3 i(2)	Transport delay testing will also require an aircraft latency test each axes.
Suggested Change:	Refer to item 105
Additional Comments:	Aircraft test data may not be available, or may be expensive to produce.

Delta Air Lines Item 105		ATA STIG Reference Number: 179
NPRM Section / Paragraph Reference: A Attach 1 3 i(2)	This section allows the use of transport delay in lieu of latency but, it still requires 3 latency tests.	
Suggested Change:	The requirement for the latency tests is redundant. The simulation response is verified in the performance tests. Transport delay measures input -> output performance through the simulation. Hence, the latency of the simulation is measured through the combination of these two tests.	
Additional Comments:	Additional testing required.	

Delta Air Lines Item 106		ATA STIG Reference Number:
NPRM Section / Paragraph Reference: A Attach 1 3 j(1)	Aircraft test result will vary. We should not need to accurately match the wet spots on the aircraft test result or the stopping time for one aircraft test.	
Suggested Change:	The stopping time should be an average of many aircraft tests or a calculated result with a large tolerance for random wet spots, otherwise the runway must have fixed wet spots that affect each wheel at the same location during the test. With the current simulator technology, this will not be a hard to do.	
Additional Comments:		

Delta Air Lines Item 107		ATA STIG Reference Number:
NPRM Section / Paragraph Reference: A Attach 1 3 k	The requirement to replicate the effects of airframe icing is new.	
Suggested Change:	This section should clarify what effects are required. There are several including effects on instruments, buffeting, engine performance etc.	
Additional Comments:	Another test to accomplish	

Delta Air Lines Item 108		ATA STIG Reference Number:
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NPRM Section / Paragraph Reference:	Deleted
Suggested Change:	
Additional Comments:	

Delta Air Lines Item 109		ATA STIG Reference Number:
NPRM Section / Paragraph Reference: A Attach 1 3 M(3)	repeat of test above	
Suggested Change:		
Additional Comments:		

Delta Air Lines Item 110		ATA STIG Reference Number:
NPRM Section / Paragraph Reference: A Attach 1 3 n	This is a new requirement asking for software control methodologies	
Suggested Change:	This section needs to be more specific on what the task of the diagnostic analysis program should be in the context of software control. What data is expected on the printouts.	
Additional Comments:	This section could be problematic for updates of old simulators because many of the older legacy simulators do not have a software control utility in place.	

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Delta Air Lines Item 111		ATA STIG Reference Number:
NPRM Section / Paragraph Reference: A Attach 1 3 n	This is a new requirement asking for software control methodologies.	
Suggested Change:	What are they looking for in a software diagnostic analysis program?	
Additional Comments:		

Delta Air Lines Item 112		ATA STIG Reference Number:
NPRM Section / Paragraph Reference: A Attach 1 5 b	Must have malfunctions for all abnormal or emergency conditions described in the sponsor's pilot operation manual.	
Suggested Change:		
Additional Comments:	Flight training should comment on this.	

Delta Air Lines Item 113		ATA STIG Reference Number:
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NPRM Section / Paragraph Reference: A Attach 1 6 c	The requirement for a 4 dof motion base for level B simulators is new.
Suggested Change:	
Additional Comments:	

Delta Air Lines Item 114	ATA STIG Reference Number:
NPRM Section / Paragraph Reference: A Attach 1 7 s (1,2)	
Suggested Change:	These are not marked as a requirement for any level.
Additional Comments:	

Delta Air Lines Item 115		ATA STIG Reference Number: 186
NPRM Section / Paragraph Reference: A Attach 1 8 c	<p>This section has a new requirement for realistic amplitudes and frequencies for the sound of precipitation and wipers. Here are the problems with these two issues:</p> <ol style="list-style-type: none"> 1. Wipers: due to the intermittent sound of the wipers sound spectrum analysis testing would not be accurate and they would have a significant amount of variability. Time histories would not be representative. 2. Precipitation: Quantifying the levels of precipitation during the data gathering session on the aircraft would be impossible hence it would not be possible to replicate the sound in the simulator exactly as it is heard in the aircraft. 	
Suggested Change:	This section needs to break out the sound of windshield wipers and precipitation from the simulator performance test section. These two items should be subjectively checked.	
Additional Comments:	Additional tests required.	

Delta Air Lines Item 116		ATA STIG Reference Number:
NPRM Section / Paragraph Reference: A Attach 2 1a(5)	<p>This section allows for the use of test flight data gathered at an extreme portion of the envelope as long as it is backed up by another test done in a normal portion of the aircraft envelope. Can the objective data source for the second test be engineering data?</p>	
Suggested Change:	Clarification required.	
Additional Comments:		

Delta Air Lines Item 117		ATA STIG Reference Number:
NPRM Section / Paragraph Reference: A Attach 2 2	2 e (4) stopping time on icy runway - new requirement? 2 e (3) stopping time on wet runway - new Requires time history (was snapshot) More new tests	
Suggested Change:		
Additional Comments:		

Delta Air Lines Item 118		ATA STIG Reference Number:
NPRM Section / Paragraph Reference: A Attach 2 3 a	The excursion requirements are too large. None of the motion system we have can meet these requirements. The motion envelopes will by increased by these requirements causing our current bay dimensions to become obsolete.	
Suggested Change:	The motion excursion requirements should be reduced to more practical levels defined by the manufacturers.	
Additional Comments:	Adoption of this rule would require the motion envelopes to be increased. This would make all our current bay obsolete as they will be too small.	

Delta Air Lines Item 119		ATA STIG Reference Number:
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NPRM Section / Paragraph Reference: A Attach 2 3 c(all)	Rudder pedal steering has new tolerance. Reworded test, new tolerance for stick force (on many tests). More new tests.
Suggested Change:	
Additional Comments:	

Delta Air Lines Item 120	ATA STIG Reference Number:
NPRM Section / Paragraph Reference: A Attach 2 3 d	These tolerances are too broad.
Suggested Change:	The motion system frequency response tolerances should be reduced to a more practical levels defined by the manufacturers.
Additional Comments:	

Delta Air Lines Item 121	ATA STIG Reference Number:
NPRM Section / Paragraph Reference: A Attach 2 3 e	This is a new requirement.
Suggested Change:	The FAA should define the motion response to flight events as a result of specific cues such as step accelerations etc.
Additional Comments:	Additional testing required.

Delta Air Lines Item 122		ATA STIG Reference Number:
NPRM Section / Paragraph Reference: A Attach 2 4	This section needs to be defined before the release of part 60.	
Suggested Change:	Definition required	
Additional Comments:		

Delta Air Lines Item 123		ATA STIG Reference Number:
NPRM Section / Paragraph Reference: A Attach 3 2 b(3)(g)	This section required SMGS which is not used in all training programs	
Suggested Change:	This part should indicate that SMGS should be tested if it is required in the certificate holder's training program	
Additional Comments:	Integration of SMGS on simulators without SMGS may be required.	

Delta Air Lines Item 124		ATA STIG Reference Number:
NPRM Section / Paragraph Reference: A Attach 3 2 d(a)	This section requires the check of high angle of attack operation which should already be checked during the stalls and approach to stalls checks thus, this is redundant.	
Suggested Change:	This requirement is redundant and should be removed.	
Additional Comments:	Additional testing required.	

Delta Air Lines Item 125		ATA STIG Reference Number:
NPRM Section / Paragraph Reference: A Attach 3 3 a(7)	This section adds a requirement for a remote IOS. This should only be dependant on the sponsor's or certificate holder's training program.	
Suggested Change:	This section should indicate that a remote IOS will be checked if it is required by the sponsor's or certificate holder's training programs	
Additional Comments:	Remote IOS's may be required on simulators that do not support this functionality.	

Delta Air Lines Item 126		ATA STIG Reference Number:
NPRM Section / Paragraph Reference: A Attach 6 3 b	This section requires two levels of windshear which will allow the instructor to select two levels. This goes against our training requirement for consistent windshear profiles.	
Suggested Change:	This section should indicate that two levels of windshears should be demonstrated for training programs that utilize multiple windshear intensity levels.	
Additional Comments:	Additional testing required. Integration of multiple windshear levels required on the IOS. Could lead to training confusion on which level of windshear to use.	

Delta Air Lines Item 127		ATA STIG Reference Number:
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NPRM Section / Paragraph Reference: A Attach 6 3 b(2)	This section calls for a un-survivable windshear which, in our judgment, has no training value.
Suggested Change:	The requirement for the unsurvivable windshear should be removed.
Additional Comments:	Additional testing required. Integration of an unsurvivable windshear available from the IOS would be required.

Delta Air Lines Item 128	ATA STIG Reference Number:
NPRM Section / Paragraph Reference: App B 7 b 1 c	The log book should provide the method for assessing the simulator performance. Only the user needs to make comments
Suggested Change:	This paragraph should be modified to reflect the use of the log book. The requirement for simulator technician feedback should be removed.
Additional Comments:	Under the current rule a mechanism in addition to the log book will have to be added. Simulator technicians will be required to provide feedback. If an additional mechanism is required it will increase the instructors workload by increasing the amount of feedback required which may already be covered in the log book.

Delta Air Lines Item 129	ATA STIG Reference Number:
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NPRM Section / Paragraph Reference: App B 9	There is no mention of how the objective data for the generic aerodynamic packages can be handled.
Suggested Change:	This needs to be explained.
Additional Comments:	

Delta Air Lines Item 130		ATA STIG Reference Number:
NPRM Section / Paragraph Reference: App B 9 a	This section requires submission of test flight data for approval which is not currently done.	
Suggested Change:	A section needs to be added that the agreed test flight data will be the reference data for simulator initial qualification and that any addition data requirements that are imposed by the FAA will not jeopardize the initial qualification of the simulator.	
Additional Comments:	A test flight data report will have to be prepared and submitted to the FAA separate from the QTG. This will be a controlled document that may have to be updated as required.	

Delta Air Lines Item 131		ATA STIG Reference Number:
NPRM Section / Paragraph Reference: App B 9 f	According to this the FAA needs to be informed of all revisions to the simulator design or reference data.	
Suggested Change:	The FAA needs to set up a means of communication with the aircraft manufacturer to allow them to inform the FAA when an update is available.	
Additional Comments:	We will have to send a letter to the FAA any time the simulator design or reference data changes.	

Delta Air Lines Item 132		ATA STIG Reference Number:
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NPRM Section / Paragraph Reference: App B 14 a(1)	This section is going to require 4 recurrent evaluations for all our FTD's. I do not believe that we currently do 4 recurrents.
Suggested Change:	This section needs to be evaluated and the appropriate number of recurrent evaluations needs to be agreed upon.
Additional Comments:	More FTD time will have to be made available for recurrent evaluations. Additionally, pilots will have to be made available to support the recurrent evaluations.

Delta Air Lines Item 133	ATA STIG Reference Number:
NPRM Section / Paragraph Reference: App B 17 a	This paragraph requires that we modify the simulator for every simulator design or reference data change. This, in most cases, will add negligible value to the flight training experience.
Suggested Change:	This section should be updated to indicate which modifications would require FAA notification and FAA approval.
Additional Comments:	

Delta Air Lines Item 134	ATA STIG Reference Number:
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NPRM Section / Paragraph Reference: App B 18 b	Appendix A gives us 30 days to replace a failed component however section 60.25 on page 60308 only gives us 7 days. Which is right?
Suggested Change:	Remove time limit.
Additional Comments:	A 7 day window does not provide enough time to correct many problems due to parts lead times. Simulators may become grounded more frequently causing training interruptions. Reference item 54.

Delta Air Lines Item 135		ATA STIG Reference Number:
NPRM Section / Paragraph Reference: App B 19 a(4)	There are many updates that are done in which the simulator is made unusable for several days (i.e. HUD). Under this rule we would loose our qualification.	
Suggested Change:	A 30-60 day window needs to be added to this rule to allow for the simulator to be modified without losing its qualification.	
Additional Comments:	A simulator could loose its qualification during update	

Delta Air Lines Item 136	ATA STIG Reference Number:
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NPRM Section / Paragraph Reference: App B 21 b	The reason for recording and sending a list of all the certificate holders to the NSPM should be clarified. This rule should be reviewed for appropriateness
Suggested Change:	Clarification/review required. Suggest to make list available to the NSPM on request.
Additional Comments:	The FAA will be inundated with more paperwork from all the operators. The FAA will be inundated with more paperwork from all the operators.

Delta Air Lines Item 137	ATA STIG Reference Number:
NPRM Section / Paragraph Reference: App B 21 d	This rule is redundant. The proof that the simulator continues to perform and handled as qualified is recorded as part of the recurrent evaluation process.
Suggested Change:	This rule should be removed
Additional Comments:	Under the rule as written we would have additional correspondence to the FAA.

Delta Air Lines Item 138	ATA STIG Reference Number:
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NPRM Section / Paragraph Reference: App B Attach 1 3 d	This is a new requirement for a latency type test. We previously could meet the latency requirement with a statement of compliance. There is nothing indicating that thruput could be used. Also, the tolerances on the response time are only defined as allotted time.
Suggested Change:	This section should be changed to match the previous qualification standards. The value of running latency tests is questionable on an FTD without motion or visual.
Additional Comments:	Increased testing required

Delta Air Lines Item 139		ATA STIG Reference Number:
NPRM Section / Paragraph Reference: App B Attach 2 2 a(1)(b)	Level 5 FTD's do not require this. Was this intentional	
Suggested Change:	Clarification required.	
Additional Comments:		

Delta Air Lines Item 140		ATA STIG Reference Number:
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NPRM Section / Paragraph Reference: App B Attach 2 2 b(1-3)	This section should indicate that a dynamic test is a suitable alternative.
Suggested Change:	Modification required.
Additional Comments:	As written this rule would require a special test applicable to the FTD only.

Delta Air Lines Item 141	ATA STIG Reference Number:
NPRM Section / Paragraph Reference: App B Attach 2 2 b(4)	App A attachment 1 Section 2c(5) only requires alternate operation of flaps/slats and gear. These test requirements should be modified to match the same test in attachment 1
Suggested Change:	Modification required.
Additional Comments:	As written this rule would require a special test applicable to the FTD only.

Delta Air Lines Item 142	ATA STIG Reference Number:
NPRM Section / Paragraph Reference: App B Attach 2 4	This section should be removed from the attachment as the CFD's are no longer required for FTD's under part 60
Suggested Change:	Section to be removed.
Additional Comments:	

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Delta Air Lines Item 143		ATA STIG Reference Number:
NPRM Section / Paragraph Reference: App B 2 5	This section needs to have a section on alternative data for jet transport type aircraft for these devices.	
Suggested Change:	Section to be amended	
Additional Comments:		