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**Comment Template for First Public Draft of Four  
Principles of Explainable Artificial Intelligence (Draft  
NISTIR 8312)**

**Submit comments by October 15, 2020 to:**  
[explainable-AI@nist.gov](mailto:explainable-AI@nist.gov)

Comment #	Commenter organization	Commenter name	Paper Line # (if applicable)	Paper Section (if applicable)	Comment (Include rationale for comment)	Suggested change
	US Army - Picatinny Arsenal - SW Quality Competency Group	Adam Hilburn	122		Consider adding example of which law/regulation. By stating an example, the reader can have a quick relatable understanding versus having to dig up the referenced paper.	This drive is motivated in part by laws and regulations, such as x,y,z, which state that decisions...
	US Army - Picatinny Arsenal - SW Quality Competency Group	Adam Hilburn	233		Clear knowledge limits aid SW testers as they develop their test cases which factor in boundaries.	Consider adding a line saying: The knowledge limits principle aids SW testers as they define test cases.
	US Army - Picatinny Arsenal - SW Quality Competency Group	Adam Hilburn	286		A Software Quality Engineering (SQE) role within AI development is to ensure there is unambiguous explanations of system outputs.	...explanations must be highly interpretable and unambiguous.
	US Army - Picatinny Arsenal - SW Quality Competency Group	Adam Hilburn	324-325		Similar to developing Safety critical SW, a solid SRS and SDD must be developed to understand the inner working of the SW.	Consider adding how traditional aka non-AI SW solutions, implement similar explainable principles.

	US Army - Picatinny Arsenal - SW Quality Competency Group	Adam Hilburn			What would be the ideal SW product/deliverable that would have all of the explainable models defined? SDD, SRS, other?	Consider adding where the explainable models should ideally be documented.
	US Army - Picatinny Arsenal - SW Quality Competency Group	Adam Hilburn			Having explainable models helps us better understand system uncertainties which will drive to better risk identification.	Consider touching on the issue with uncertainty within AI systems and how explainable models can help better characterize the uncertainty...which leads to identifying the proper SW testing strategy.
	US Army - Picatinny Arsenal - SW Quality Competency Group	Adam Hilburn			Is there work being done to decompose the criteria for what constitutes a meaningful model? I'm assuming the criteria revolves around the traditional quality criteria: testable, unambiguous, complete, etc.	n/a
	US Army - Picatinny Arsenal - SW Quality Competency Group	Adam Hilburn	608-609		Collaboration is needed to find a middle ground for what is considered meaningful. This is critical for SQE because we cannot create a test strategy with an uninterpretable model.	...what is considered meaningful varies by context and across people. Collaboration amongst all stakeholders (SW developers, SQE, system eng) is required to establish meaningful models.
	US Army - Picatinny Arsenal - SW Quality Competency Group	Adam Hilburn		687	Compare this line to the need for properly characterizing the context of the system.	n/a