



EDucation: Quality Engineering, Science & Technology

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Comments:

U.S. Department of Health and Human Services)	
Food and Drug Administration)	
Electronic Records; Electronic Signatures; Public Meeting)	[Docket No. 2004N-0133]
Notice of Public Meeting and Request for Comments)	
69 Fed. Reg. 18,591 (April 8, 2004))	

EduQuest, Inc. respectfully submits these written comments in response to FDA's April 8, 2004 Federal Register notice (69 Fed. Reg. 18,591) concerning the ongoing re-examination of the 21 CFR Part 11 regulation on electronic records and electronic signatures.

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2004N-0133

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VIA E-MAIL AND FACSIMILE (301-827-6870)

U.S. Food and Drug Administration
Division of Dockets Management (HFA-305)
5630 Fishers Lane (Room 1061)
Rockville, Maryland 20852

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EduQuest is in a relatively unique position to comment on the issues raised in the above-referenced Federal Register notice. During his tenure at FDA, our company President, Martin Browning, co-chaired the working group that drafted Part 11, served as one of the agency's national experts on computerized systems, and was centrally involved in establishing many of FDA's

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regulatory approaches, guidance documents, and internal training related to software and computerized systems. Our staff also includes other former senior FDA officials, including several Investigators, a Director of an Investigations Branch, and another of FDA's national experts on computerized systems who also served as both an Investigator and a District Director of Information Resource Management. In addition, several of our consultants have extensive FDA-regulated industry experience, with expertise in software development, validation, quality, compliance, manufacturing, and clinical research. Based on our background and depth of expertise in this area, FDA hired EduQuest in 2000 to train the agency's field investigators, analysts, and headquarters compliance staff on Part 11 and the auditing of computerized systems.

As former FDA investigators, industry experts, and now as consultants to regulated firms and trainers of both the regulated industry and FDA, we have seen the best and worst of what companies have done with regard to software and computerized systems from both sides of the inspection and enforcement fence. As a result, we are able to provide first-hand insights on the following key issues in FDA's re-examination of Part 11 –

- The initial objectives and the simplicity of the original intent of Part 11;
- The need to ensure data integrity;
- The reality of the current confusion and problem areas;
- The issues that are now subject to the enforcement discretion described in FDA's September 2003 Part 11 Scope and Application guidance document; and
- Clarifying the link between these issues and the common sense approach to applying the basic requirements of good software and systems development and maintenance (i.e., good software and systems engineering) practices in the FDA-regulated industries.

Executive Summary

Our comments address what Part 11 was originally intended to accomplish and how FDA can ensure data integrity by adopting a common sense approach to the application of the basic concepts and requirements of good software and systems development and maintenance practices in the regulated industries. In this regard, we recommend that any changes in either the language of

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the regulation or FDA's stated interpretation be focused on simplification and a rational return to the original intent. These kinds of changes would be sensible and would substantially improve the level of understanding between FDA and the industry. This suggested approach also would further clarify that most of the Part 11 requirements –

- Were already (and still are) required under the applicable predicate rules for pharmaceutical, medical device, and biologics manufacturing, clinical, laboratory, and other regulated activities; and
- Are consistent with the well-established basic requirements of good software and systems engineering practices that are routinely employed in many other industries.

We believe that all of FDA's Part 11 re-examination analyses and decisions should be based upon, driven by, and judged against two critically important concepts – i.e., the assurance of data integrity and good recordkeeping. The assured integrity of regulatory data and records sits at the very core of FDA's public health responsibilities. The assurance of data integrity is also one of the fundamental purposes of the good practice standards for software and systems engineering. All of these related underlying concepts – data integrity, recordkeeping, and good software and systems engineering practice – can and should be applied in accordance with risk and intended use.

FDA's statutory remit covers a broad and varied range of regulated operations and products, and the regulated industries use an extensive number and variety of computerized systems to perform tasks that span the entire spectrum of regulatory concern. Given these realities, it would not be practical or possible for the agency to establish detailed, explicit interpretations that would address all of the industries' various permutations and remove the need for regulated firms to make subjective, scientifically justified decisions about the controls that are needed to mitigate potential system hazards and assure an adequate level of data and record integrity. We believe, therefore, that both science and logic require FDA to re-focus its Part 11 efforts on a flexible and scalable approach that is based upon intended use, good software and systems engineering practice, and the need for data and record integrity.

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General Comments on Part 11 Simplification and a Return to the Original Intent

FDA's Original Intent and Objectives

FDA's original intent in defining and drafting 21 CFR Part 11 was based on a set of straightforward and simple objectives --

- To encourage and facilitate the adoption of technological improvements without a loss in data integrity;
- To provide for no less integrity of electronic data and electronic signatures than for paper-based data and signatures; and
- To accomplish the above within the existing regulatory framework.

In defining how it would meet this original intent, FDA sought to avoid "reinventing the wheel" and chose to --

- Rely on existing FDA recordkeeping regulations;
- Draw from industries that were already experienced in dealing with electronic data integrity (e.g., the financial, banking, and legal industries); and
- Apply "common sense" (sometimes referred to as a "risk-based" approach).

It should be noted that these original goals are completely consistent with the agency's currently stated objectives in its re-examination of Part 11 -- i.e., "[t]o prevent unnecessary controls and costs, yet retain the objectives of the rule"; "[t]o clarify the scope of Part 11 (e.g., how it relates to other FDA regulations)"; and "[t]o ensure that Part 11 provides an adequate level of record security, authenticity, and integrity, and encourages innovation and technological advances." 69 Fed. Reg., at 18,592.

Departures from FDA's Original Intent and the Nature of the Current Problems

Despite the simplicity of FDA's original intent, Part 11 has resulted in a controversial and difficult set of problems since the final rule was issued in 1997. The current problem areas are all related to significant disconnects in some of FDA's pre- and post-issuance decisions and

implementation approaches, and in the regulated industries' application of a number of the clearly and simply stated requirements of Part 11.

One of the key reasons for these disconnects was that both FDA and the regulated industries failed to recognize that there were substantial differences between their perceptions and reality. For example, FDA did not realize that there was a significant gap between what the agency perceived (or presumed) to be the existing level of software and systems engineering practices in the regulated industries in 1997 and the reality of those practices. At the same time, many FDA-regulated firms had not yet fully understood and implemented many of the basic, fundamental concepts of good practice that were now explicitly required by Part 11. In addition, many companies were not fully aware of the number of systems (many of which were later determined to be non-compliant) that would be subject to the requirements of the final rule. As a consequence, the common level of practice within regulated companies was far below what FDA perceived as the industries' starting point, and FDA's stated expectations far exceeded the industries' perception of what companies had previously considered to be acceptable practice. This "reality gap" set the stage for all of the controversy, confusion, and debate that followed. It also begins to explain why and how both FDA and the industries so drastically underestimated the economic impact of the new regulation, and why many firms have struggled to understand, consistently comply with, and sought to clarify some of the key requirements over the past seven years.

Although progress certainly has been made since 1997, the reality of the current problems surrounding Part 11 are directly related to the following points –

- Industry management was taken by surprise, in terms what the final rule actually required and the sheer magnitude of the work and resources that would be needed to bring hundreds or – in many companies – thousands of systems into compliance;
- Regulated firms varied in their degree of realization that Part 11 is not a "quality" problem – i.e., that compliance with Part 11 was not something that could simply be referred to and achieved by the company's quality unit;
- A continued lack of full and consistent understanding of –
 - The logical and scientific bases for some of the key requirements (such as validation). This incomplete understanding continues to drive some companies' resistance to adopt practices that will routinely meet those requirements; and

- The scope and both the explicit and implicit (i.e., the logical extension of and the interpreted and/or enforced meaning of) requirements of the “predicate” regulations;
- Some people in the industry continue to have the view that many of the predicate rule and Part 11 requirements (such as validation) are externally imposed add-on activities that are driven by the desire to generate documentation simply for the sake of its being available for FDA review during an inspection, rather than being clearly understood as key fundamental components of basic good software and systems engineering practice that can also deliver real business benefits; and
- Prior to the current re-examination of Part 11, FDA had disseminated piecemeal guidance in both official (but draft) guidance documents and in numerous “unofficial” statements and opinions from agency officials at meetings and conferences. During that time, FDA’s interpretations of the requirements changed (sometimes in a creeping fashion and other times in significant step changes), and some of those shifting interpretations resulted in irrational and unnecessary extremes that went far beyond the original intent and objectives. The more it appeared to the regulated industries that FDA was vacillating or making up the meaning of the rules as it went along, the more firms struggled and became entangled in their own internal debates about the basic expectations and how to effectively meet them. Because many firms still did not fully understand or adhere to basic good software and systems engineering practices, companies often expected FDA to be much more explicit and definitive in its Part 11 guidance. This expectation continues to exist, even though it clearly is not reasonable or realistic to expect that FDA would or even could teach the industry about software and systems engineering practices. This is especially true because the concepts and standards of practice are not new and the regulated industries have much more substantial technical capabilities and resources than the regulatory authorities could ever apply to these issues.

Some of the current problem areas and controversies can be summarized as follows –

- Validation – inconsistently and often poorly understood and defined (in accordance with FDA’s stated definition), especially in the software industry;
- “Documents” versus “records” – no distinction was made in Part 11;

- Audit trails – Part 11 did not clearly define an audit trail as data change documentation (as it is commonly defined in the financial industry, and which would have established a clearer conceptual link to long-standing predicate rule requirements for creating and maintaining documentation of changes to recorded data);
- “Grandfathering” of legacy systems – FDA chose not to allow it under Part 11 (an unrealistic approach given the disconnects discussed above);
- Archiving – FDA created unnecessary confusion and complexity by interpreting new requirements into the regulation (that went beyond the original intent) with regard to the archiving of both records and systems;
- Time stamps – a classic “red herring” issue that could have easily been addressed using a simple, common sense approach;
- Electronic copies of electronic records – another example of a sensible requirement that became overly and unnecessarily complicated by FDA’s interpreting more new requirements into the regulation (that also went beyond the original intent); and
- A glossary – FDA did not generate a clear glossary of terms and definitions under Part 11, leaving the regulated industries and FDA Centers and personnel to reach varying interpretations of terms that FDA has defined in different ways over the years.

The Path Forward – Simplification and a Return to the Original Intent

We firmly believe that the best way for FDA to move forward and achieve a reasonable, sensible, and justified position on Part 11 is to simplify the interpretation of the regulation by –

- Returning to the original intent;
- Adopting a scientific approach that is based on common sense; and
- Refocusing on the basic objectives of meeting the agency’s public health responsibilities to ensure –
 - (1) Data integrity (the primary basis for all of the requirements);
 - (2) The quality and reliability of software and computerized systems, in accordance with their intended uses; and

- (3) An appropriate degree of contemporaneously-developed objective evidence that supports and demonstrates that the first two objectives have been met.

In our view, FDA should follow this simple and rational path forward. We further believe that FDA can meet most of the intent and objectives outlined above by taking the following steps –

- Define “computerized system validation” as establishing documented evidence of the use of good software and systems development and maintenance practices, applied according to the intended uses – i.e., the risks – of the system;
 - It should be noted that this is entirely consistent with the definition of validation used in FDA’s internal training on Part 11 and the auditing of computerized systems – “establishing documented evidence that provides a high degree of assurance that a specific process will consistently produce a product meeting its predetermined specifications and quality attributes”;
- Distinguish between documents and records and the way in which they are created and maintained;
- Clarify that an audit trail is a data change record that is required by many of the predicate rule requirements for creating and maintaining records of changes to recorded data;
- Grandfather systems that were in use prior to the effective date of Part 11 (August 20, 1997), as long as all of the applicable predicate regulations are met and until those systems are retired or replaced;
 - This is another area where FDA should focus upon and require the use of hazard control (i.e., the documented and scientifically justified identification, evaluation, and mitigation of risks) to ensure that additional technical and procedural safeguards (i.e., controls) are implemented in the interim, if needed, to achieve and maintain each system’s compliance with the predicate rules;
- Clarify that the purpose and utility of archived electronic records are the same as they are for archived paper records – i.e., documenting what happened, and not replaying, redoing, or reprocessing the event;
- Apply common sense to issues such as time stamps, password use, etc.;

- With regard to electronic copies of electronic records –
 - Stick with the concept that a copy is an exact copy, not a reinterpretation of data, not data modified into a “universal” format, and not a different representation of the data;
 - FDA will find the ability to use, interpret, and analyze an exact copy of an electronic record just as it did for many years prior to Part 11;
 - An exact copy will also have the benefit of being recognized as “evidence” without confusing or making the industry validate otherwise unnecessary conversion processes; and
- Develop a proposed glossary of terms under Part 11, to clarify FDA’s current interpretive definitions of key concepts, including the suggested definition of “computerized system validation” discussed above. In order to avoid unnecessarily duplicating previous efforts, FDA should use its existing Glossary of Computer Terminology (published in 1995) as the starting point for many of the definitions.

If FDA follows this suggested approach to revising and simplifying its interpretation of Part 11, we do not believe that there would be a need to change any of the text of the regulation itself. All of these issues can be dealt with by republishing the text of Part 11 and making sure that the agency’s interpretation takes the scope and nature of the current problems into account and matches what was originally intended.

Specific Comments in Response to Questions Posed in the Federal Register Notice

In addition to our general comments discussed above, we offer the following specific comments in response to some of the questions posed by FDA in the April 8 Federal Register notice. Because many of the Part 11 issues raised by FDA are interrelated, we have not provided specific comments on each question. We believe that our general and specific comments, as a whole, address each of the significant issues currently under re-examination.

FDA Question 1, Part 11 Subpart A – General Provisions (69 Fed. Reg., at 18,592)

“In the part 11 guidance document, we clarified that only certain records would fall within the scope of part 11. For example, we stated that under the narrow interpretation of its scope, part 11 would apply where records are required to be maintained under predicate rules or submitted to FDA, and when persons choose to [use] records in electronic format in place of paper format. On the other hand, when persons use computers to generate paper printouts of electronic records, those paper records must meet all the requirements of the applicable predicate rules, and persons rely on the paper records to perform their regulated activities, FDA would generally not consider persons to be ‘using electronic records in lieu of paper records’ under Sec. 11.2(a) and (b). In these instances, the use of computer systems in the generation of paper records would not trigger part 11. We are interested in comments on FDA’s interpretation of the narrow scope of part 11 as discussed in the part 11 guidance and whether part 11 should be revised to implement the narrow interpretation in the guidance.”

EduQuest Comments

We agree that Part 11 should only apply to required records (a category of records for which we have suggested a definition in response to another of FDA’s questions below) and certain types of records that are submitted to FDA in electronic format. We believe, however, that the remainder of FDA’s stated interpretation is unnecessary and that, without further qualification, it lacks a sound scientific rationale.

Computerized systems are used in the regulated industries in a wide variety of contexts and settings. These uses range from simple word processing features used to create hard-copy SOPs, to originally recording raw data and processing conditions and calculating quality control data (e.g., the calculated area under an empirical curve) that will be used to make batch release decisions, just to name a few examples. FDA’s current interpretation establishes a blanket position that does not take any of those various contexts and potential complexities into account. In our view, there is no need for the agency to establish a blanket interpretation that could create further problems by being subject to confusion and varying context-irrelevant conclusions. We also believe that FDA should not take interpretive positions that could predictably lead to results that would undermine the goal of encouraging the advancement and widest use of technology (in this specific case, we believe that

the agency's stated interpretation could encourage firms to not take advantage of the powerful technology and added precision and productivity that electronic systems can provide, simply in order to avoid the reach of the Part 11 requirements).

As a general statement, in the absence of 100% data verification, the agency's current interpretation is also inconsistent with the need (for both FDA and regulated firms) to adequately ensure the integrity of what is printed on the paper records and thus used for regulatory purposes. FDA has made it clear that it intends to adopt and apply a "risk-based" (what otherwise might be stated as a hazard control) approach to Part 11. The proper use of a hazard control methodology would result in the development of documented, scientifically justified bases for the design and level of controls to be applied to a specific computerized system, in accordance with its intended regulatory use. In other words, each system would be required to be appropriately designed and controlled based on justified use- and risk-based scientific reasoning. In this regard, a word processing system that is used to generate hard-copy SOPs that are then 100% verified by proofreading, review, and approval would require far less controls around its design and use than systems that are used for purposes that have a greater potential to impact product, process, record, and data integrity and are less capable of being fully verified.

FDA Question 3, Part 11 Subpart B – Electronic Records (69 Fed. Reg., at 18,592)

"Under the current part 11, the controls that apply to electronic records that are maintained also apply to electronic records that are submitted to FDA. Should the requirements for electronic records submitted to FDA be separate from electronic records maintained to satisfy predicate rule requirements?"

EduQuest Comments

We believe that the phrase "submitted to FDA" is vague and unnecessarily over-inclusive, in that does not establish any distinctions based on the purpose of the submission and the related need for data integrity and accuracy. Records are submitted to FDA for many reasons, and the data integrity and accuracy risks associated with the various types of submissions – and the potential penalties that can attach to erroneous information – are not all equal.

Data integrity issues can have a widely varying impact on regulatory concerns, depending on the nature of the submission and the purpose of the submitted data. For example, data integrity problems in a cover letter for an NDA or similar approval-related filing would be of marginal (if not negligible) concern, whereas the integrity of the content of the filing itself (which would include analyses of pre-clinical and clinical study data and chemistry, manufacturing, and control specifications for the process and product) would be of substantial concern. A related but somewhat different spectrum of regulatory concerns would apply to potential problems in the accuracy and scientific substantiation of conclusions, statements, and claims made to FDA in a submission.

It would be useful for FDA to reduce the current level of subjectivity and provide more instructive guidance that associates the specific Part 11 requirements for electronically submitted records with the purposes and risks related to specific types of submissions. This probably would require FDA to generate an explicit list of examples of submissions that warrant Part 11 controls, based on the agency's view of the related data integrity and accuracy risks.

FDA Question 1, Part 11 Subpart B – Individual Controls (69 Fed. Reg., at 18,593)

“The part 11 guidance identified validation as one of the four areas where we intend to exercise enforcement discretion in the manner described in the guidance. Should we retain the validation provision under Sec. 11.10(b) . . . to ensure that a system meets predicate rule requirements for validation?”

EduQuest Comments

We firmly believe that the validation provision in Part 11 should be retained, in order to reiterate the need for adequately ensuring system and data integrity, and to avoid further confusion driven by the less-than-explicit nature of many of the predicate rules.

For decades prior to its re-examination of Part 11, FDA consistently took the sensible scientific position that all systems should be validated – according to their intended use. This position is entirely consistent with a “risk-based” hazard control approach as noted above. FDA should not use the past and continued struggles and controversy over validation concepts as a reason

computerized systems that impact their regulated operations and products. Some of the challenges have resulted from the fact that FDA's current expectations regarding software and computerized systems validation were derived largely from process validation concepts and large-scale software development projects. In contrast, most of the industries' current systems are configured or assembled from standard software components, either commercial-off-the-shelf applications, or a package of functions and modules that can be switched on or off and customized by specifying certain parameters. This technological reality is one of the important factors that should and can be appropriately considered as part of a hazard control based determination of what constitutes "adequate" validation of a specific system.

We noted in our general comments above that the concepts and standards of good software and systems engineering practice are not new. The same can be said with regard to formal hazard control methodologies, which were originally developed by the U.S. military in the 1940s. They include a number of different long-standing and common engineering methods that involve the systematic identification and evaluation of potential hazards in a system or process, and the careful consideration, development, and implementation of design changes or other controls intended to avoid the occurrence or mitigate the consequences of each identified hazard. The application of these methods admittedly becomes more difficult and complex in instances where there is limited knowledge of the details of the software design, structure, and data flows (which is often the case with vendor developed and supplied software, especially for large complex systems like enterprise resource planning or ERP systems) and where subjective (but scientifically supportable and rational) assumptions must be made and included in the analysis. It also should be recognized that the full scope of FDA's definition of a "computerized system" (i.e., software, hardware, procedures, and people) needs to be taken into account, so that control mechanisms and other safeguards beyond those designed into the software (such as additional procedural controls, confirmatory checks, etc.) are understood and incorporated into the system's use.

We believe that FDA should require regulated companies to validate all systems that impact any regulated activities, with those validation efforts being defined and justified according to the intended use of each system and its potential effects on (or potential hazards to) regulated data, processes, products, records, and decision-making. Why? Because no other approach makes sense in light of FDA's public health responsibilities and the broad and varied range of regulated

operations and products that fall within the agency's remit. Validation simply needs to be more widely understood as a flexible, scalable, subjective concept that must, by definition, be based on the potential impacts and risks of each specific system and thus cannot be reduced to an all-or-nothing approach. The continued lack of understanding of the nature of validation causes many firms to waste tremendous effort and resources in straining to avoid it and/or in going above and beyond what is reasonably and rationally necessary based on intended use.

FDA should also retain validation as a requirement in Part 11, because it helps to clarify the need for adequately ensuring system and data integrity, beyond what is and what is not explicitly stated in the other various regulations in Title 21 of the CFR. FDA certainly understands that validation is and has been required and enforced for decades in areas where the published language of the predicate rules does not include the term "validation" (e.g., the Part 211 pharmaceutical GMP and Part 58 GLP regulations). It should be clear by now that many of the predicate rules implicitly require validation under provisions like those that include requirements for equipment to be of "appropriate design" (a phrase used in both Part 211 and Part 58), where the term equipment has been interpreted to include computers and validation is the way to demonstrate that a computer is of "appropriate design." In our experience, however, regulated firms vary greatly in their degree of understanding of these implicit requirements, and some adhere to the mistaken assumption that if the predicate rules do not explicitly mention validation, then validation is not required. FDA needs to recognize this disparity, and exercise care in making simple references to the "validation requirements of the predicate rules."

FDA Question 3, Part 11 Subpart B – Individual Controls (69 Fed. Reg., at 18,593)

"Should audit trail requirements include safeguards designed and implemented to deter, prevent, and document unauthorized record creation, modification, and deletion?"

EduQuest Comments

We believe that the existence of an audit trail does provide some degree of deterrence against unauthorized electronic activities. In our view, however, both FDA and the regulated industries have placed too much emphasis on the deterrence and detection-of-wrongdoing aspects of

audit trails, as those audit trail functions are far less important from a quality and compliance perspective than the need to ensure appropriate, accurate, contemporaneous, and reliable recordkeeping. In addition, it is doubtful that additional audit trail requirements would materially increase the deterrence effect, and any such requirements would probably increase the difficulty of compliance without materially increasing system security or data integrity.

The function of an audit trail is to record various change activities, such as creating, modifying, or deleting data and records; enabling or disabling system privileges and functions; and other change events. Audit trails are often misunderstood and viewed as an additional, technically unnecessary and unreasonable requirement that has been imposed by FDA simply to facilitate inspections and to deter and detect fraud. If, as we have suggested above, FDA clarifies that an audit trail is focused on recording data changes (a requirement that is found in many of the predicate rules), it will increase the likelihood that audit trails will be more appropriately understood as a rational, basic component of good software and systems engineering practice, the primary purpose of which is for the company's benefit, not the regulators'.

An audit trail can be used to monitor recordkeeping to assure that it is appropriate and accurate, and that records are created and completed when they should be and by the persons who are authorized and responsible for the recorded actions. An audit trail also enables retrospective reviews for patterns of activity that may be of both business and regulatory concern (e.g., process control). In failure investigations, an audit trail can identify the time and type of activities that could have resulted a process or product failure. An accurate and complete audit trail is critically important to the pharmaceutical firm, for example, when a manufactured product fails to meet its final release specifications and must be rejected. When this occurs, the company has to be able to conduct a detailed failure investigation to determine what went wrong and when. Smart companies even recognize that this is as much a matter of good business practice as it is a clear requirement under the GMP regulations. If an accurate and complete audit trail is not available, the firm may not be able to pinpoint a definitive root cause of the failure and thus not be able to assure itself or FDA that it can continue to manufacture without running into the same unacceptable variation in the process and the finished product.

FDA Question 4, Part 11 Subpart B – Individual Controls (69 Fed. Reg., at 18,593)

“Section 11.10(k) requires appropriate controls over systems documentation. In light of how technology has developed since part 11 became effective, should part 11 be modified to incorporate concepts, such as configuration and document management, for all of a system's software and hardware?”

EduQuest Comments

The concepts of configuration management and document management are basic, long-standing components of good software and systems engineering practice that are not dependent on the available technology and always should have been viewed as incorporated in the “appropriate controls” required under section 11.10(k). For many years before Part 11 was issued, FDA expected and issued inspectional observations under the predicate rules regarding the appropriate management and control of system configuration, documentation, and other related issues (e.g., software and document version control). We believe that FDA should explicitly clarify its stated interpretation of Part 11, in order to eliminate any further confusion or lack of understanding of the requirements for systems documentation controls.

FDA Question, Part 11 Subpart C – Electronic Signatures (69 Fed. Reg., at 18,593)

“Within the context of subpart C, we would like interested parties to address the following: Section 11.10(d) requires that system access be limited to authorized individuals, but it does not address the handling of security breaches where an unauthorized individual accesses the system. Should part 11 address investigations and followup when these security breaches occur?”

EduQuest Comments

We do not believe that it is necessary for FDA to include an explicit requirement in Part 11 with regard to investigations and follow-up responses to system security breaches. Those obligations should be clear under the predicate rules on corrective and preventive actions and other GxP requirements. In addition, it makes perfectly logical sense that a detected security breach in a

system that involves or otherwise could impact a regulated function would trigger the need to conduct an investigation to address the potential effects of the breach on regulatory data and decisions and the related need for both corrective and preventive action. We believe that FDA should explicitly clarify its stated interpretation of Part 11, however, in order to eliminate any further confusion or lack of understanding of these requirements.

FDA Question 1, Additional Questions for Comment (69 Fed. Reg., at 18,593)

“What are the economic ramifications of modifying part 11 based on the issues raised in this document?”

EduQuest Comments

As discussed above, we believe that the initial and ongoing divergence of views of the economic impact of Part 11 were based on the following key reasons –

- FDA and the regulated industries failed to recognize that there were substantial differences between their perceptions and reality concerning the existing level of software and systems engineering practice and what Part 11 required; and
- There were a number of significant disconnects in some of FDA’s pre- and post-issuance decisions and implementation approaches, and in the regulated industries’ application of a number of the clearly and simply stated requirements of Part 11.

We believe that FDA can ensure a more realistic and shared understanding of the true economic impact of Part 11 by rationally simplifying its interpretations as suggested in our general comments, providing further clarification, and strongly emphasizing the importance of applying basic good software and systems engineering practice and ensuring data integrity.

FDA Question 2. Additional Questions for Comment (69 Fed. Reg., at 18,593)

“Is there a need to clarify in part 11 which records are required by predicate rules where those records are not specifically identified in predicate rules? If so, how could this distinction be made?”

EduQuest Comments

FDA’s question highlights a corollary problem to the one described above with regard to the confusion created over predicate rule validation requirements in cases where the applicable predicate regulations do not explicitly include the term “validation.” The agency could try to address this by generating an exhaustive list of all of the records required under each of the sets of predicate rules that apply to all of the various industries and products that FDA regulates, but this would be impractical and probably not reasonably achievable in the near term. Alternatively, we believe that FDA could clarify and substantially reduce this ongoing confusion and debate by stating its interpretation that the term “records required under the predicate rules” includes the following –

- Records that are explicitly required by the language of a predicate rule;
- Records that are necessary to establish compliance with a predicate rule requirement. This would include situations where complying with a predicate rule requirement is achieved and evidenced by the generation and maintenance of a record (i.e., where compliance logically can only be achieved by establishing documented objective evidence of that compliance – for example, where compliance with the requirement that personnel be properly qualified is established through records related to their education, training, and experience); and
- Records that are required under the firm’s policies and procedures for purposes of ensuring compliance with the predicate rules and any other commitments made by the firm regarding its compliance and quality requirements (such as process requirements and quality control and product release specifications established in an application or similar filing submitted to FDA – e.g., NDA, ANDA, IND, PMA, 510(k), IDE, PLA, etc.).

FDA Question 7, Additional Questions for Comment (69 Fed. Reg., at 18,593)

"Should part 11 address record conversion?"

EduQuest Comments

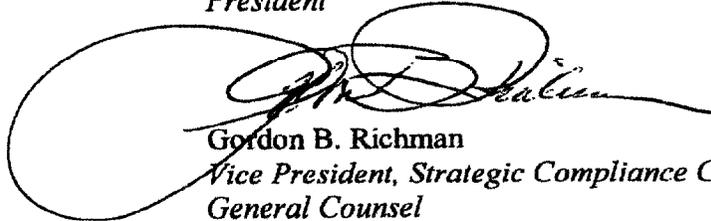
As noted above in our general comments regarding FDA's approach to archiving records under Part 11, we do not believe that Part 11 should require record conversion in order for firms to provide electronic copies of electronic records to the agency. If, however, a regulated firm chooses to convert electronic records for the purpose of archiving records or migrating data from one system to another, then the conversion process should be validated if the converted data cannot or are not going to be 100% verified.

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Thank you in advance for considering our comments and suggestions. Please contact us at 301-874-6031 if you have any questions or need any further information or clarification of our views.

Respectfully submitted,


Martin Browning
President


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