

Check 21 Compliant Checks and Image File Size Requirements

A review of the impact on check security resulting
from bank requirements for low image file size.

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Background

The Check Clearing for the 21st Century Act, the legislation known as Check 21 went into effect October 28, 2004. Check 21 provides the right, but the not requirement, to convert a paper check into an electronic image at any point in the clearing process. When a physical document is subsequently required, a bank can reconvert the electronic image into a substitute check (also known as an image replacement document or IRD). This substitute check is the legal equivalent of the original paper check. The Check 21 Act requires that the converting entity or financial institution (often the bank of first deposit) provides warranties that the substitute check includes all the information contained on the original check, and that the substitute check is not processed for payment twice (no double debit). It also contains an indemnity that allows a paying bank to charge back a loss resulting from receiving a substitute check rather than the original check, after its midnight deadline. The indemnity requires that the original check have safety features that did not survive the image conversion process, and that the bank's procedures were such that it would have reviewed and likely caught the alteration or counterfeit had the original check been presented.

Point of Acceptance

While Check 21 significantly speeds the handling and collection of checks, it is likely to stimulate significant growth in check fraud that is un-prosecutable. Because paper-based security features do not survive the imaging process, and the physical fraudulent item may be destroyed (making it impossible to examine for evidence of fraud). Banks and corporations alike are anxious for a solution that will identify a fraudulent item from the image itself, and not require the physical check for validation. As yet, an "image-survivable security feature" has not been proven in the real world.

The key to a successful item protection process appears to remain where it has always been: at the point of entry. Any fraudulent item that enters into the payment system ultimately costs somebody. While the banks are seeking to improve their ability to identify a fraud with an image-survivable security feature, thereby holding the fraud closer to the point of acceptance, the only solution that protects both the banks and their customers is one that makes it possible to recognize a fake when it is presented. If an accepting institution or retailer cannot ascertain the legitimacy of an item with sufficient confidence, it is not bound to accept that item. Said another way, what good is your check if no one is willing to accept it for fear of fraud?

Effective Defense Against Fraud

From a defensive posture under Check 21, companies and individuals would be well served to use checks with excellent safety features that are not image survivable. These include true watermarks in the paper, thermochromatic ink, and paper or ink that is reactive to 15+ chemicals. These features would help authenticate the document visually, deter fraud attempts, aid in the detection of fraud at the point of acceptance, and potentially shift the liability for losses to the converting bank.

Frank W. Abagnale, nationally acclaimed expert on document security, supports this position:

“I believe that Check 21 does not diminish the value of security features. While the search for image-survivable security features continues, the only solution that protects both the banks and their customers is one that makes it possible to recognize a fake when it is presented. Banks should encourage customers to use high-security checks with eight or more security features and offer such checks to their business and consumer customers.”

Check 21 Compliant Checks

There have been some concerns about what modifications need to be made to check designs to make them Check 21 compliant. Check 21 facilitates image exchange by allowing banks to truncate original checks after imaging, and creating a new negotiable instrument called a “substitute check” or image replacement document (IRD). *Specifications for an Image Replacement Document-IRD* (ANS X9.100-40) describes the requirements of the substitute check.

No new standards for check design have been defined as a result of Check 21. As long as our checks are American National Standards compliant, no design changes have to be made. Image quality is more important than ever with the possibility that a substitute check will be created from a check image. The *Bank Check Background and Convenience Amount Field Specification* (ANS X9.100-30 and ANS X9.100-110) and *Specifications for Check Endorsements* (ANS X9.100-111) are the standards most likely to affect the legibility of data in an image. These two standards specify background reflectance, clutter, and PCS of areas where important check data is found.

Image File Size Issues

As financial institutions move to imaging checks, bank operations are increasingly focused on image file storage size. Although there is no American National Standards limit on file storage size, financial institutions are choosing to set their own file size limits. Some of these institutions are choosing values so low that check security is threatened.

There are several reasons banks are pushing for smaller image file sizes. The primary reason is storage. As banks increase the number of items that they image, they will require more electronic storage capacity. In addition, banks may be providing their corporate customers with check images on removable storage, such as CDs. The banks want to minimize the number of CDs they need to send back to customers (optimally, one CD per customer). Finally, as banks begin to increase image exchange, image file size will play a major role in data transmission speeds.

Measuring Image File Size

Banks may ask for a sample check from their customers to measure the image file size. Most banks will use the RDM X97 Image Qualifier, not their actual image capture device (which may be incorporated into their reader/sorter). As with any measurement device, there may be differences between individual machines due to calibration, maintenance, operator performance, etc. In addition, the RDM will generally report a higher image file size than the image capture device.

Standard Register supports the use of a common measurement system for image file size to ensure that banks, their customers and check manufacturers are able to consistently compare document imaging results. The RDM Image Qualifier X97-OCR is the industry standard for validating image quality of checks against ANSI standards, and is the tool used by Standard Register. The American Standards Committee X9B group is looking into various aspects of check image quality, and we will update this document with new information when available. Standard Register is also proposing a project to compare the results of RDM-reported image file size against the results of actual images captured on BancTec, Unisys, NCR and IBM readers. This will enable the bank to make better-informed decisions about the acceptability of a check for image file size compliance. Until this testing is completed, a 2:1 ratio is an acceptable rule of thumb (the expected actual file size will be ½ the size of the RDM file size).

What does this mean for our customers?

When banks set an image file size limitation, they may force their customers to reduce or remove security features on the check. Under the Uniform Commercial Code, Section 3-103(7), check issuers are required to perform due diligence to secure their checks against fraud, or risk being held liable for any losses that result from fraudulent checks.

We are striving to maintain a balance between security and low file size. Of our secure check offerings, only CopyBan Capture will consistently meet Check 21 imaging requirements. Although there are no American National Standards file size limits, CopyBan Capture will also meet the low file size requirements enforced by some banks.

Frank Abagnale has provided his expert recommendations to corporate customers who are faced with a requirement from their bank to reduce image file size of their checks:

“There are no laws, regulations, policies or ANSI specs that have anything to do with restricting the file size for a check. The lowest file I have seen pushed is 50KB; 30KB is unheard of. My response would be very simple. Tell your bank that there are no requirements under the law to accept this demand from the bank. If you are willing to remove your security features at the request of the bank in order to lower the file size, you will need a letter of indemnity from the bank that holds you harmless in the case of any forgeries, counterfeit or alterations of a check made against your account.”

Finally, most of this talk is coming from the bank's operations people.

This is not something the fraud side of the bank agrees with. In summary:

- 1. I would honor no request from a bank asking me to reduce a file below 50KB.*
- 2. I would ask for a letter of indemnification if they pushed the matter."*

Additional Reference Materials

www.x9.org - Accredited Standards Committee X9

“Is your Check 21 Implementation a Fraud Hazard?” – A white paper published by Unisys, featuring three financial security experts (including Frank W. Abagnale) who explain how Check 21 implementations can lead to spectacular fraud detection failures and discuss steps to mitigate the risk. (2004)

“Check 21 and Image Security” – A white paper co-published by Standard Register and Frank Abagnale that reviews the implications associated with identifying image-survivable security features in response to recent Check 21 legislation. (Rev. 03/17/2004)