Subject: HOA Computer Operations
From: walt <walt@cassbeth.com>
Date: 2/23/2018 1:54 PM
To: John Gallagher <gallagher41@comcast.net>, Terry Giannetti <tbgiannetti@gmail.com>, Abe Greenbaum
<abegreenbaum@gmail.com>, walt <walt@cassbeth.com>

Hello,

At each meeting I keep hearing the office computer come up but then the discussion stops. So I decide to stir up the pot.

This is some background on work setting computers:

- We are a non profit company (HOA) that decided to hire a subcontractor to perform certain functions as defined in the contract. The subcontractor staff is physically located on HOA property. In this scenario they use HOA facilities and equipment. HOA equipment includes phone, copiers, printers, faxes, and the computer?
- For subcontractor staff permanently assigned to a company location the computer is always provided by the company. This is a long established practice that traces to risk management. The subcontractor may be permitted to bring their company computers on site depending on security policies.
- If the subcontractor is offsite then the computer is their property and they would make official deliveries to the HOA in the form of paper and data. All final product official business data must be delivered to the HOA in a manner that the HOA can access and read including computer data files.
- Any intermediate work products can be on the subcontractor computers regardless of where they physically work. No work product content can be on personal computers unless approved by the HOA and subcontractor. Each must ensure the personal computer is properly secured.

This means that the HOA must be able to accept, control, maintain, and archive its data. If it fails to do this I suspect there are some serious legal ramifications. The question then is how to fulfill this responsibility.

If you give that responsibility to one of the subcontractors that also produces work products, then there is a conflict of interest. This translates to a potential compromise situation where data may be lost in a dispute.

So what can we do to maintain the HOA computer and data resources? At the highest level we can:

- 1. Hire an IT sub contractor / consultant
- 2. Use volunteers as IT staff

In all cases proper procedures are in place and the staff sign appropriate documents to ensure security and privacy liability. Ideally the technology should be such that the IT staff are never able to see the data content. Data content is only accessible to those given that privilege. This brings up security. Most people are aware of the need to know and least privilege access rules. Most are not aware of the right to know. Most of the HOA data will fall into the right to know category. I would claim that even proposals with final price quotes are in that category. But that is a different topic.

So what would our computer system look like. We have a few alternatives:

1. Current approach. - do nothing

- Not sure how data is delivered to the HOA.
- Not sure if the HOA can easily access delivered data in all situations.
- Not sure how data is archived.
- Access and archiving should be public info.
- Security is not about hiding things it is about a rock solid process that can not be compromised.

2. Buy a Server and Hire IT company / consultant to Administer

- Server is remotely maintained by IT company / consultant
- As policy all delivered HOA products are placed on the network.

- Network content is inspected by a HOA official representative (not subcontractor) prior to each HOA meeting.
- Network content is archived quarterly by IT company / consultant.

3. Buy a Cloud Service

- Cloud is maintained by cloud company
- As policy all delivered HOA products are placed on the cloud.
- Cloud content is inspected by a HOA official representative (not subcontractor) prior to each HOA meeting.
- Cloud content is continuously archived by cloud company.

4. Hire IT Consultant / Company

- They decide to either install server, buy cloud service, or both
- They maintain server or cloud
- As policy all delivered HOA products are placed on the server or cloud.
- Server or Cloud content is inspected by a HOA official representative (not subcontractor) prior to each HOA meeting.
- Server or Cloud content is automatically archived by cloud company or quarterly by IT company.

5. Add a network drive - Mom and Pop Approach

- As policy all delivered HOA products are placed on the network drive (USB or wireless).
- Network drive content is inspected by a HOA official representative (not subcontractor) prior to each HOA meeting.
- Network drive is to be archived quarterly to another drive that is locked in a fire proof closet.
- The archive needs to be done in the presence of the HOA official representative.
- Adding another computer in the clubhouse would allow the HOA to inspect the network drive content without disturbing office operations. It would also allow other non management company HOA data to be developed, maintained, and stored (e.g. Website).
- Backup and archiving mechanisms guidance in this setting is critical. One of the functions of the operating system is to ensure data integrity especially during backup and coping of data. Do not use any third party archive tools. They always fail at some point and they force users to call the tool provider and pay to recover. Data is usually lost along with cash. Use the operating system to back up all data. Just drag and drop the highest level folder. When prompted just pick the options to copy all or if available the newest date files. The backup folder structure should always match the original source structure. Do not perform any manual activities like rename etc.
- If a wireless drive is selected they sell cloud services but this raises security issues that must be examined
- Once a computer is added, this is similar to the buy a server approach, the difference is the loss of training and discipline by not having an IT company / consultant.

The common element in all the approaches except for the current approach is:

- As policy all delivered HOA products are placed in an official area accessible by the HOA at anytime.
- Content is inspected by a HOA official representative (not subcontractor) prior to each HOA meeting.
- Content is archived for recovery.

This needs to be properly addressed. DR Horton is gone and with it is some protections and adult supervision.

Walt