



Northwest Washington Chapter of the International Code Council



NEWSLETTER MAY 2011

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Vacancy

Contact [Sharon Pettit](#)

Membership

If you have not already submitted your membership application please take the time to complete the form and return it ASAP!

See the last page of the newsletter for the 2011 membership application.

Thank you.

President's Message

Hello— It's time for me to ride into the sunset. At least back up a little. Sharon Pettit takes over as president this month and she will lead us admirably. It's her third or fourth time as president—the charm is sure to work! Thanks Sharon!

Other board members were elected and some were appointed. Please see the list to the left. If you can help please call.

Jerry's workload forces him to resign as newsletter editor. Thanks for the good work on the newsletter the last two years, Jerry!

Thanks to all those that supported NWCICC with memberships, attending meetings and our seminar last April. Special thanks to the seminar instructors; Tim Nordvedt of Mill Creek, David VanBeek of Marysville, Jim Tinner of Bellingham and Willie Hill of BHC Consultants.

Thanks, Tom Radford

Survey

Chapter members please take the time to complete this survey. It only takes about ten minutes and will help the board members better serve you!

[Survey](#)

If you have any questions on the survey please contact [Mike Fitzgerald](#).

Newsletter

NWCICC NEWSLETTER HAS A NEW LOOK!!

We are trying this new format for our monthly newsletter. Please contact [Joyce Gundry](#) if you have any questions or comments.

Thanks!

Website

Be sure to check out our website for additional information!

[NWCICC](#)



Calendar of Events

Board Meeting

May 5, 2011

5:00 pm

[Pine Street Grill](#)

3105 Pine Street
Everett, WA 98201

RSVP Sharon Pettit

pettit@ci.snohomish.wa.us
360.282.3158

Board Meeting

June 2, 2011

5:00 pm

[Pine Street Grill](#)

3105 Pine Street
Everett, WA 98201

RSVP Sharon Pettit

pettit@ci.snohomish.wa.us
360.282.3158

Workshop

June 9, 2011

Building A Code Compliant Deck

3:00 pm to 6:00 pm

Cost \$20.00 (includes dinner)

[Best Western—Pacific Rim Supper Club](#)

3228 Marine View Drive
Marysville, WA 98271

RSVP Don Stout

dstout@ci.monroe.wa.us
360.863.4536

Jim Mattison is the Senior Territory Representative for Simpson Strong-Tie. Jim has been in the Western Washington and Alaska territories since 1991. Jim's background includes 10 years as a presenter at Simpson's workshops, four years as a project engineer with a large Seattle general contractor and Jim has an undergraduate degree from the U of W in Construction Management. Jim's coworker Kevin Bourn will also be speaking at the workshop.

This workshop will include emphasis on new and existing requirements of the 2009 IRC and IBC. Specific topics include the prescriptive requirements for: ledger fastener spacing table of the code, use of alternate ledger fasteners, guard/hand rail post-to-deck structure requirements, considerations for lateral design and corrosion basics for fasteners and connectors in contact with treated wood and salt spray environments.

Please RSVP so we can ensure that each attendee will receive workshop materials. RSVP [Don Stout](#)

Fire Alarm Communications Methods

By Michael Fitzgerald, Fire Marshal
May 4, 2011

A year ago this month, the Northwest Washington Chapter of the International Code Council presented a workshop for the purpose of discussing Fire Alarm Communications methods. There was a strong turnout for this workshop, with a good mix of AHJs and industries represented. Fire Alarm Communications, as it was discussed, involves the transmission of signals between the Fire Alarm Control Panel (FACP) and the (usually) central station that monitors the building's fire alarm system. A lot of clarification on the requirements and the allowances found in NFPA 72 has been made since this workshop. This article updates these changes since that workshop a year ago.

Background

There are four challenges or areas of confusion with Fire Alarm Communications. The main challenge is the root cause of all the other challenges with fire alarm communications, and that is the fact that emerging technology is rapidly outpacing the ability for AHJs and codes and standards to keep up. The second challenge is that the National Fire Alarm Code (NFPA 72) requires that there are 24 hours of battery backup to the fire alarm system (usually through the FACP) and most current technology does not provide for the same amount of battery backup to the signal communications side. The third issue is that NFPA 72 has historically required two methods of communications – a primary and some type of redundant method of transmitting the FACP signals to the central station. New technology does not necessarily provide for redundant communications; as you will note below, it has not necessarily been occurring as we believe it is anyway. The final issue is that most, if not all of the fire alarm communications signaling equipment is not listed for Fire Alarm Systems. NFPA 72 §10.3 states that all equipment shall be listed for the purpose it is used for.

Emerging Technologies versus Legacy Technology

Some of the emerging technologies that are common in our region now are FiOS (Fiberoptic system), several prominent cable companies, wireless radio and IP DACT (Internet Protocol Digital Alarm Communicator Transmitter). For the most part, all of these technologies are now built out to the extent that they will all function as though they are the old copper phone lines we all grew up with. Most fiberoptic and cable communications system utilize an Embedded Multimedia Terminal Adaptor (EMTA) – what most people would call a modem – that contains a battery providing up to 8 hours of battery backup. Industry representatives state that this is substantial enough backup because their own Managed Facilities monitor battery life remotely. Also, industry states that 99.4% of power failures last less than 4 hours, and 99.9% of power failures last less than 90 seconds. Primary internet-based voice providers such as Vonage and Magic Jack are not Managed Facilities, and therefore do not meet NFPA 72 requirements.

So, what's wrong with copper phone lines and Plain Old Telephone Systems POTS? Nothing, except that it is antiquated technology that is no longer supported. These Publicly Switched Telephone Networks (PSTN) are now almost all digital and yet this is old technology.

In December 2009, AT&T requested that PSTN technology be allowed to sunset. In fact, for 10+ years copper phone lines have left our buildings and gone to a hub somewhere that converts copper to one of these other technologies. If your FACP had two copper phone lines (primary and a redundant second), for over a decade now, they have been converted to a single communications system at a hub.

Here are some considerations if you are an AHJ that authorizes the method of Fire Alarm Communications.

Battery Backup

- Is your proposed cable or Fios provider providing any less battery backup than your legacy phone company has been providing for the past 10+ years? (Probably not, but you should verify this).
- Should you mandate testing of the batteries of the communications system during acceptance testing or annual confidence tests? (Probably so)
- EMTAs give precedence to voice communications over internet communications (that's good).

Redundant Communications Method / Sole Communications

- Redundant communications methods are not required with systems which annunciate at the supervising station within 5 minutes of the failure (NFPA 72 §26.6.3.1.4.1 – 2010 edition). This usually requires properly programmed hardware at the transmitting and receiving sites in addition to an approved "pipeline" for sending signals.
 - ◇ IP DACT
 - ◇ Radio AES
 - ◇ Other transmission methods (make the signal transmission provider prove to you that their hardware and "pipeline" are compliant)

Listing of Signaling Equipment

NFPA doesn't necessarily require UL 864 listing for equipment attached to alarm systems. Rather, the standard requires that the equipment is "listed for its purpose". Even though its purpose is to transmit fire alarm system signals, this is only part of its purpose: it is voice equipment and is listed as communications equipment. UL has adopted a similar position. Since a listing applies only to equipment, and not the alarm transmission service, it is up to the AHJ to verify and approve the service that is transmitting the alarm signals.

Recommendations for AHJs

- The 2009 editions of the International Building Code and the International Fire Code adopts the 2007 edition of NFPA 72 by reference. The 2010 edition of NFPA 72 provides stronger language about fire alarm communications methods, and industry reps, NFPA, and some AHJs recommend that the 2010 edition be specifically adopted by jurisdictions.
- It may be appropriate to require an affidavit from fire alarm signal transmission services that not only can be utilized to verify the compliance of equipment, but also the method of signal transmission. A sample affidavit is attached, and you are welcome to modify it for your own use.

- Even though equipment may be listed for sole communications, this required polling service and *recognition* of a missed signal costs the signal transmission company more money at the central station, so evaluate this very carefully before approving sole communications technology.

No matter what, the AHJ has the authority to determine what technology will be allowed within a particular jurisdiction. This decision should be made after considering recognized standards. At a minimum, the AHJ should only allow fire alarm communications to occur on a “managed system” (Managed Facilities Voice Network, Managed VoIP, etc.). TIA 10-03 of NFPA 72 (2010 Ed.) clarifies this requirement of MFVNs. Also, AHJs should research this issue and keep themselves educated about the issue. Membership in the NWCICC is a great way to keep abreast of important issues such as this.

Summary

- Fire alarm signal transmission must be accomplished via a Managed Facility Voice Network.
 - ◊ There are finite requirements of a MFVN in NFPA 72 (2010 ed.)
- Most technologies in our region are capable of transmitting fire alarm signals in accordance with the requirements of NFPA 72 with the exception of primary internet voice providers (Vonage, Magic Jack, etc.).
- Two methods of signal transmission are not necessarily required anymore; however, you must ensure that the “pipeline” and programming of the equipment for sole transmission is compliant.
- Consider requiring an affidavit to demonstrate compliance (see below).

Note: Recommendations and sample affidavit are provided by the author only and do not constitute a recommendation of the Northwest Washington Chapter of the International Code Council or the International Code Council.

Comments on this article can be sent to mfitzgerald@monroefire.org.

Note for Sample Affidavit (below): ALL boxes below line marked with * should be checked in order for a system to be compliant as a MFVN.

Affidavit of Fire Alarm Signal Transmission Method

This affidavit exists for fire alarm signal transmission service providers to certify to the customer and to the fire department that their method of service meets the signal transmission requirements of NFPA Standard 72. This affidavit must be completed by the signal transmission provider and approved by _____ prior to changing the method of signal transmission.

Address of protected property: _____

Name of business: _____

Business phone number: _____ Contact name: _____

.....

Fire alarm signal transmitter (FAST) provider: _____

FAST phone number: _____ Contact name: _____

Email address: _____

Type of technology (mark 1): Analog Digital VoIP

FAST company is (mark 1): Telco Cable Internet

Signal transmission is (mark 1): Primary 1° Secondary Sole

Primary & Secondary with 2 lines

Model number of communications hardware: _____

Listing sheets must be attached with this affidavit which indicate listing approval of the device model listed above.

My signature below certifies that I am an authorized representative of the FAST provider indicated above and that the following statements about the methods of signal transmission utilized by this company are true (check all that apply):

- Managed-facility based
- Functionally equivalent to PSTN
- Proactive management
- Our company owns and operates the physical network from PSTN to DACT
- Loop start telephone circuit
- Voice equipment has minimum 8-hours battery standby
- Equipment at central office has minimum 24-hours battery standby
- System has safeguards to protect against unauthorized access
- We will notify fire department after cut-over to re-test alarm system
- System is professionally installed to ensure line seizure
- System has disaster recovery plan

Signature

Date

After completing this affidavit, send to your customer and to _____ at _____ or fax: _____. If approved, a copy of this form will be returned to you with approval. **Approval is required before existing signal transmission service is modified.**



**Northwest Washington
Chapter of ICC
NWCICC.ORG**



2011 MEMBERSHIP APPLICATION

Membership Renewal

New Membership Application

Name: _____ Title: _____

Mailing Address: _____

City: _____ State: _____ Zip Code: _____

Jurisdiction / Company Name: _____

Business Phone: _____ Home Phone: _____

FAX #: _____ E-MAIL: _____

This is very important. Newsletters are sent by e-mail

Alternate mailing Address: _____

City: _____ State: _____ Zip Code: _____

Dues Schedule: Active = City/County/State/Federal Agencies
 Associate = All others

ACTIVE MEMBER = \$15.00 / YR ASSOCIATE MEMBER = \$15.00 / YR

Please make checks payable to: NWCICC (Northwest Washington Chapter of I.C.C.)

REMIT TO:
NWCICC/Membership
P.O. Box 1510
Monroe, WA 98272

Space below is for Chapter use only.

DATE RECEIVED: _____ AMOUNT PAID: _____ CHECK NO: _____

RECEIPT NO. _____ RECEIPT DATE: _____