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MR. BELL: Good afternoon ladies and gentlemen, my pleasure to serve as your presiding officer for the remainder portion of this afternoon's Technical Session. Hopefully we won't have to work too late.

The next report under consideration this afternoon is that of the Technical Committee on carbon monoxide detection. Here to present the committee report is Committee Chair Tom Norton of Norel Service Company, Incorporated, located in Concord, Massachusetts. The committee report can be found in the blue 2011 annual revision cycle ROP and ROC. The certified amending motions are contained in the motion's committee report behind me here on the screen. We'll proceed in the order of the motion number presented. Mr. Norton.

MR. NORTON: Mr. Chairman, ladies and gentlemen, the report of the Technical Committee on carbon monoxide detection is presented for adoption and can be found in the report on proposals of the report on comments for the 2011 annual meeting revision cycle. The Technical Committee published a report consisting of a partial revision of NFPA 720
standard systems for the installation of carbon
monoxide detection and warning. The report was
submitted to a letter ballot of the Technical
Committee that consists of 27 voting members and the
technical correlating committee of the signalling
systems for the protection of life and property that
consist of 17 voting members. The ballot results
can be found on pages 720-1 to 720-13 of the report
of proposals, and pages 720-1 to 720-18 of the
report of comments. The presiding officer will
proceed with the certified amending motion.

MR. BELL: Thank you, Mr. Norton. Now
let's proceed with discussion on NFPA 720, the first
motion sequence is number 720-1. Is there a motion?

Microphone No. 5.

MR. KLEIN: Mr. Chairman, my name is
Burton Klein, Burton Klein Associates, and Jon
Woodard's authorized representative. Mr. Woodard is
unable to attend this technical session. And I
would like to move acceptance of Mr. Woodard
comments 720-1.

MR. BELL: So the motion on the floor
is to accept 720-1. Is there a second?
THE FLOOR: Second.

MR. BELL: I hear a second. Proceed.

MR. KLEIN: I believe the membership and attendance has the document relating to Mr. Woodard's reasons for submitting the NITMAM on technical committee action and public.

MR. BELL: Thank you. Mr.

MR. NORTON: The committee voted to reject this proposal, and the committee statement that the alarms that he is referring to are standalone components and the submitter proposes for off premise communication equipment which is characteristic of the system and not a signal station alarm.

MR. BELL: Thank you. Microphone 2.

MR. CLARY: Mr. Chairman, Shane M. Clary Bay Alarm Company speaking against the motion which is a motion to modify my original proposal which was 720-4 on the proposal, and as Chairman Norton indicated, the definition is for a seal alarm which is a standalone unit and not a system. And also just for the record, if this were to come to appeal, I would be recusing myself at the Standards
Council meeting. Thank you.

MR. BELL: Thank you. Any further discussion? Seeing no one at the microphone we'll move to the vote which is to accept Comment 720-1. All those in favor please raise your hand. Thank you. All those opposed. Motion fails.

Let's move on to motion sequence 720-2.

Microphone 5.


MR. BELL: The motion is to accept proposal 720-9. Is there a second?

THE FLOOR: Second.

MR. BELL: I hear a second. Please proceed.

MR. VAN OVERMEIREN: Prior to this addition, NFPA 720 focused primarily on residential occupancy. This addition encompasses residential and commercial applications for CO for life safety purposes and industrial applications of CO detection for hazardous gases. As a life safety device the
next addition of NFPA 72 will require C O signals to be considered an alarm not a supervisory signal. The first portion of this proposal creates a prioritization of the emergency signals which will specifically allow building owners, system designers, and the AHJ to treat seal alarms differently than fire alarm signals. Not that it with the condition would be treated as a one-fit all alarm condition. This provision will not go through and interrupt the testing of fire alarm systems in any manner. Many of us are aware of situations where existing devices in locations other than the zone of initiation have activated prior to the devices in the zone of incident. As a result, the wrong fire alarm voice message can be broadcast or the wrong group of doors or smoke management system operate. Please note that these provisions only provide flexibility in the design of CO detection and the AHJ approval of those systems. Where the signals for these systems are connected to building fire alarm system. This proposal does not change the installation cost or affect any cost as far as testing and maintenance. I speak in favor of the
motion to accept proposal 720-9.

MR. BELL: Thank you. Mr. Norton would you like to offer the committee's position, please.

MR. NORTON: The committee voted to reject the committee statement. The intent of the proposed recommendation is unclear. The placement of the new text is inappropriate in Section 5.1 which deals with the interactions for the rest of the standard. The proposed material seems to be dealing with coordination of different signals and different systems which are primarily addressed in NFPA 72.

MR. BELL: Thank you. Microphone No. 5.

MR. VAN OVERMEIREN: Frank Van Overmeiren, F P C Consultants. Comment on Mr. Norton's comments. This chapter or this standard was notably reorganized and changed as part of the expansion of its scope to address the devices and other occupancies other than residential atmosphere. As part of that reorganization, the original proposal was submitted to Chapter 5. Chapter 5 is entitled protected premises carbon
monoxide detection systems. This proposal is addressing those systems that are interconnected to the building fire alarm system.

Section 5-1 is application. While the proposer may not have known exactly where to put this proposal in Chapter 5, at the time the proposal was submitted, Chapter 5 was being substantially changed. The committee couldn't reorganize. Thank you.

MR. BELL: Any further discussion?

Mr. Norton, anymore further comment?

MR. MORTON: No.

MR. BELL: We move to the vote to accept proposal 720-9. All those in favor of accepting proposal 720-9 raise your hand. Thank you. All those opposed. Motion fails.


MR. KLEIN: Burton Klein, Klein Associates. Authorized representative for John Woodard who was unable to attend the session. I would like to move Mr. Woodard's comment 720-6.

MR. BELL: So the motion on the floor
is to accept comment 720-6. Is there a second?

THE FLOOR: Second.

MR. BELL: I hear a second. Please proceed.

Mr. KLEIN: Again I believe membership and attendance has documentation relating to Mr. Woodard's reasons for submitting a NITMAM on Technical Committee action rejecting his public comment.

MR. BELL: Thank you. Mr. Norton.

MR. NORTON: Thank you, Mr. Chairman.

The committee voted to reject this comment, and again the committee's statement is similar to the first motion was that the alarms referenced are standalone components and the submitter proposes off premise communication equipment which is characteristic of a system not a single station alarm.

MR. BELL: Thank you, Mr. Chairman.

Microphone 2.

MR. CLARY: Thank you Mr. Chairman.

Shane M. Clary, Bay Alarm Company speaking against the motion. I am the author of the original
1 proposal 720-4, and again this revised definition
2 was for a standalone carbon monoxide alarm and not
3 for a part of a system. And again for the record,
4 that this were to come to appeal at the Standards
5 Council I would be recusing myself. Thank you.
6 MR. BELL: Thank you. Microphone 2.
7 MR. BLACK: Mr. Chairman, Art Black
8 Carmel Fire Protection, principal on 720. And I am
9 confused because it looks like 720-1 which we --
10 speaking against the motion. 720-1 which just was
11 voted on and failed was to included a definition
12 3311. This particular comment deals with annex
13 material for that definition that we just voted out.
14 So it seems like this is moot, and I'm voting --
15 speaking against the motion.
16 MR. BELL: Any other discussion?
17 Seeing no one at the mike we are going to move the
18 vote to accept comment 720-6. All those in favor of
19 the motion please raise your hand. All those
20 opposed. Thank you. Motion fails.
21 Thank you, Mr. Norton.
22 The next report for consideration this
23 afternoon is that of the Technical Correlating
1 Committee on healthcare facilities. Here to present
2 the committee report is Technical Correlating
3 Committee Chair Douglas Erickson of the American
4 Society for Healthcare Engineering located in
5 Christiansted, Virgin Islands. The committee report
6 can be found in the blue 2011 Annual Revision Cycle
7 ROP and R0C, the certified amending motions are
8 contained in the Motions Committee Report behind me
9 here on this screen. We'll proceed in order of the
10 motion number presented. Mr. Erickson.
11
12 MR. ERICKSON: Ladies and gentlemen,
13 the Technical Correlating Committee on healthcare
14 facilities is presenting one report for adoption and
15 can be found in the report on proposals and
16 reporting comments for the 2011 annual revision
17 cycle. The Technical Committees and Technical
18 Correlating Committee and Healthcare Facilities has
19 published a report consisting of a partial revision
20 of NFPA 89 standard for healthcare facilities. The
21 report was submitted to letter ballot of the
22 Technical Correlating Committee and the Technical.
23 The ballot results can be found on pages 99-4 to
24 99-198 of the report on proposals and pages 99-4 to
The presiding officer will now proceed with the certified amending motions.

MR. BELL: Thank you, Mr. Chairman.

The first motion on NFPA 99 which is motion sequence number 99, the maker of that motion has notified NFPA that they do not wish to pursue this motion.

So we're going to move to sequence number 99-2.

Microphone No. 5.

MR. KLEIN: Thank you, Mr. Chairman, Burton Klein or Burton Klein Associates. I'm representing myself. I would move acceptance of my proposal 99-75 on Chapter 4 of the current edition of NFPA 99.

MR. BELL: Motion on the floor to accept proposal 99-75. Is there a second?

THE FLOOR: Second.

MR. BELL: I hear a second. Please proceed.

MR. KLEIN: I would like to point out my proposal has nothing to do with applying requirement NFPA 99 retroactively. Second, there was no intention change or revise any wording.
involved in this proposal. My intent was only to
relocate existing wording on the subject of
maintenance and testing also referred to
administration of some of the chapters in several
chapters in NFPA 99 into separate chapters thereby
separating requirements for existing systems and
equipment from new systems and equipment
requirements. In my proposal I made reference to a
similar separation of new requirements from existing
requirements in another NFPA document NFPA 101 life
safety code. And the third reason when NFPA was
first compiled in 1982 and then restructured in NFPA
in 1984, keeping all requirements on one topic and
one chapter seemed the best way to arrange material.
The chapters involved were divided into four
sections. Source, distribution, testing of new
systems or equipment, and last one section covering
means and testing of systems and equipment already
in use.
The chapters involved in proposed
restructure of 2012 this arrangement is not so
readily evidence and with paragraph numbers and 6
and 7 digits, I concluded it is time to separate new
from existing into separate chapters just to make it
easier for users of the document, and this includes
both private sector and in the enforcing sector to
see when requirements apply. Thank you, Mr.
Chairman.

MR. BELL: Thank you. Mr. Erickson.

MR. ERICKSON: Thank you, Mr. Chairman.

The Technical Correlating Committee did charge the
Technical Committee within the 99 project to go
forward and identify those given paragraph numbers
that would apply to both new and existing healthcare
facilities. As Mr. Klein has said, those are
typically testing, have to do with maintenance and
operation of these systems as the installation and
equipment requirements are not considered
retroactive. When the committees looked at the
volume of the section numbers that they would be
pulling into a new chapter called existing
electrical systems existing medical gas systems,
there were only 4 or 5 sections that would have been
pulled into this new chapter. So therefore it just
seemed a little silly to create a brand new chapter
on existing. So what they did was they wrote a
1 section that said for the following section numbers
2 they shall apply to both new and existing healthcare
3 facilities.
4 MR. BELL: Thank you, Mr. Chair.
5 Microphone 6.
6 MR. BEEBE: Chad Beebe American Society
7 for Healthcare Engineering speaking on opposition of
8 the motion. We looked at this a number of times and
9 tried to figure out if we needed actual existing and
10 new chapter in this. If we do this it's actually
11 going to fragment all the chapters up we're going to
12 end up having little bits of existing chapter
13 information. And as Mr. Erickson says, it's really
14 going to make it more confusing to authority having
15 jurisdiction and the users of the document. So I
16 urge you not to support the motion on the floor.
17 MR. BELL: Thank you. Microphone 6.
18 MR. DAGENAIS: Dave Dagenais speaking
19 on behalf of myself in opposition to the motion. I
20 am a member of the TCC Committee a member of the
21 Electrical Technical Committee. I'm going to read
22 you exactly the way it states. 6.1.2. The following
23 paragraph in this chapter shall apply to new and
existing, and goes on to list 1, 2, 3, 4, 5 and so on. Very clear, very consist, gets right to the point. There is no need for an additional chapter with respect to a small amount of the document that would apply to new and existed. I urge the body to support the committee and vote against this motion.

MR. BELL: Microphone 6.

MR. MANTON: Thank you, Mr. Chairman.

Dean Manton, Providence Health and Services Oregon, representing the healthcare section. I stand in opposition to the motion on the floor.

MR. BELL: Any further discussion?

Microphone 5.

MR. KLEIN: Burton Klein Associates, in favor of the motion obviously. The question of amount of materials did not seem germane in terms of anyone trying to find the new and the existing within a particular chapter. In the current edition it was much more evident than it is today, and I concur that placing material just small parts of it into a separate chapter may be cumbersome, but in single -- would be very relative evidence that existing and new and separate and if someone wants
to find out just what needs to be needed to look at
one particular chapter. Thank you.

MR. BELL: Any further comment?

Mr. Erickson.

MR. ERICKSON: No, sir.

MR. BELL: No seeing no one else at the
microphone, we'll move to the vote to accept the
proposal 99-75. All those in favor please raise
your hand. Thank you. All those opposed. Motion
fails.

Next motion in sequence is number 99-3.

Microphone 5.

MR. KLEIN: Burton Klein, Burton Klein
Associates. In light of the vote I respectfully
withdraw my next three motions to save time for the
other presentations.

MR. BELL: Thank you. Maker of the
motion is sequence number 99-3, 99-4, and 99-5 is
not going to pursue those motions. So we move
directly to motion sequence number 99-6. Microphone
No. 3.

MR. NASBY: James Nasby representing
myself. I have no akin other than I'm on the
operating table or one of my family members is or is
on life support. By way of introduction, I have a
BS degree Illinois Institute of Technology, a few
courses away from BS.

MR. BELL: Make your motion first.

MR. NASBY: I'm in favor of the motion

my NITMAM.

MR. BELL: So your motion as I
understand is to return a portion of the report in
the form of proposals 99-39, 99-40 and 99-108 and
related comments 99-35, 99-36, 99-37, 99-123 and
99-124. Is that correct?

MR. NASBY: Correct.

MR. BELL: So that's the motion on the
floor. Is there a second?

THE FLOOR: Second.

MR. BELL: I hear a second. Please
proceed.

MR. NASBY: Thank you. I am here
representing myself. I am here on my own nickel or
as dedicated fanatics say, I'm self funded. I am a
member of NFPA 20. Again representing myself. I'm
a former member NFPA 110. Former member of NFPA 70
code-making panel 13, the previous few cycles, and also a contributing author to several NFPA publications.

The reason for the NITMAM is the standard seeks to eliminate the term emergency systems. From my viewpoint this could create chaos in the design and construction enforcement aspects of emergency power supplies. Emergency systems whatever you call them. Some can say that this is a semantics type of ploy rather than employing sound engineering, the point being that electrons are electrons and emergency equipment is emergency equipment. By eliminating the word emergency systems, this now, and applying requirements in 99 roughly parallel requirements of NFPA 70, national electrical code Article 700 and also 517 both of which do use the term emergency systems as well as numerous other standards, is going to create a conflict as to who enforces what, who builds to, designs to what, who submits to what, and who inspects to what.

So I see a situation of scope overlap which I think is going to create a lot of confusion.
I didn't see any substantive reason stated in the report and proposals or comments for this change. Now the substantiation to proposal 99-139 reads, I quote, Avoid any further confusion with term "Emergency systems" as used in Article 700 of NFPA 70. Now I don't know what is confusing where, and I don't know of any proposals or request for formal interpretation or TIA that was sent to the national electric code NFPA 70. I'm not sure the reason that NFPA 99 wanted to depart from the long standing requirements of Article 700 which would appear to be either the object or what is wind up occurring in certain situations anyway, or 517, somebody could say it looks like throwing out the baby with the bath water, but again emergency loads are emergency loads are emergency roads. So the real question is do we have the same reliability as in existing healthcare facilities and other facilities. The requirements that have been added to 99 again try to cover what used to be called emergency system leaves a number of holes that are
picked up in Article 700 such as temporary power,
mechanically held transfer switches, identification
of service entrance equipment, marking of emergency
equipment, and others. And as a result, again there
can be interacting conflicts both within the new
requirements added to 99 as well as conflict between
99 and NFPA 70 and other standards. The emergency
systems and NFPA 70 is used by numerous enforcement
agencies. And again, what will they do, where do
they go.

With regard to the term performance,
what is in the national electrical code has been
accepted by Standards Council and this organization
so I'm going to say unless someone has proposals
that change the scope of NFPA 70 what is in there is
the requirement.

MR. BELL: 30 seconds.

MR. NASBY: So the questions are why
would new facilities be less reliable on emergency
power than older and existing facilities and why
less reliable than other facilities and also the
fact that the existing requirements in 70 are being
enforced and built and designed to this day as we
1 speak. I thank you for your consideration.

2 MR. BELL: Thank you. Mr. Erickson.

3 MR. ERICKSON: Yes, Mr. Chairman.

4 Before I turn it over to Jason D'Antona what I would
5 like to do is read to you what the inner -- what's
6 called the inner committee on emergency power supply
7 systems that did as a result of, first of all
8 Standards Council asked us to all get together so
9 let me read a couple of paragraphs here before we go
10 any further.

11 As I say, the Standards Council
12 appointed a task group called inner committee
13 coordination on emergency electric systems to
14 clarify the performance versus installation scopes
15 of work of panel 15 of the NEC and NFPA 20, 72, 99,
16 110 and 5101 and 5000. Mr. Carpenter chaired the
17 task group reporting back to the council in August
18 of 2009. The council provided the following
19 statement. Without deciding in advance what the
20 council would do regarding specific jurisdictional
21 issues related to this topic, council considers the
22 guidance in the report be useful. They instructed
23 NFPA to work with the TCs and provide guidance on
the use of the following two definitions.

Performance requirement. A specification of the manner in which equipment or a system is intended to function or operate.

Installation requirement, a specification of the material and process associated with putting equipment in place and making it ready for use in accordance with the performance requirements.

On the issue of selective coordination and central electrical power supply systems which we'll get to in a little bit, if I may go forward, it says NFPA 99 has the responsibility for establishing the performance requirements for the prevention of cascading outages. And NFPA 70 has the responsibility for the installation solution on selective coordination as defined by the performance criteria set by NFPA 99.

On the issue of the central electrical power supply systems NFPA 99 has the responsibility for the reliability of backup power sources and NFPA 70 has the responsibility for the installation solutions of selected load pick up load shedding,
peak load sharing as defined with the performance

criteria set by NFPA 99.

I appreciate your allowing me to read

this because there was a committee that was a task

force of the Standards Council reported back to the

Standards Council and that's what the Technical and

Tech Correlating Committee was working off of when

we were proceeding to do our work.

MR. BELL: Thank you. Microphone 5.

VOICE: Thank you, Mr. Chairman.

MR. BELL: Sorry. Hold on.

MR. ERICKSON: What I would like to do,

Mr. Chairman is to have Jason D’Antona who is a

member of the committee respond to this. Mr. Vern

was unable to attend the meeting as the chair of the

committee. So Jason will.

MR. BELL: Microphone 2.

MR. D'ANTONA: Thank you, Mr. Chairman.

My name is Jason D'Antona, senior electrical

engineer with Partners Healthcare in Boston. I'm

here representing the HEALS committee in a position

on this.

The intent of the committee was you
actually clarify some definitions that were causing
some issues. Article 700 has a definition for a
term called emergency system. NFPA 99 has a
definition for an emergency systems. These two
definitions were close but they had different
meanings so we were concerned that they would cause
confusion.

One of the concerns from the NITMAM was
that in fact we were relieving ourselves of the
requirements of Article 700. In fact what we were
trying to do is clarify what portions of the system
applied to Article 700. And in fact in NFPA 70,
Article 51726 it says the essential electrical
system shall meet the requirements of Article 700
except as amended by Article 517. So no matter what
we do, whether we take the term out or leave as is
all portions of the essential electric system which
includes life safety critical and equipment branch
still apply to Article 700.

MR. BELL: Thank you. Microphone 5.

MR. KOVACIK: Thank you, Mr. Chairman.

I'm John Kovacik with Underwriters Laboratories,
speaking on behalf of the electrical section of NFPA
and speaking for the motion on the floor. The electrical session met this morning and the members voted to support certified amending motion 99-6. The members therefore support the motion on the floor, that is the members of the electrical section of NFPA. Thank you.


MR. DAGENAIS: Dave Dagenais speaking on behalf of the healthcare section in opposition to the motion. This morning at the healthcare section executive board meeting the membership and the board voted to oppose this motion. The healthcare section thinks that the Technical Committee has done an excellent job in clarifying the terminology that is currently used within the industry. Within the healthcare world it exists life safety branch, critical branch, and equipment branch. Terms like essential systems just confuse the installers as well as the maintenance as to what they need to do. The bottom line, the terminology is to clarify. There is no allegation that it would separate from 700, and it doesn't do so as read by the chair. We urge everyone to support the committee in this
action and support the healthcare section. Thank you.

MR. BELL: Thank you. Microphone 5.

MR. SAPRETUS: Vince Sapretus, Cooper Bussmann. I speak in support of the motion. If you read the ROP and ROC it's obvious that NFPA 99 technical committee is trying to divorce itself from the requirement is of Article 700. In doing so, they have removed the word emergency. They've removed the definition of emergency system. And what does that result in? Let's go over a few of the things that it results in. 700.78 requires that a sign be placed at service entrance equipment showing the type and location of an on site emergency power source. That's no longer required. With no signage where the firemen go to locate the emergency source. 700.26 permits the omission of ground fault protection on the north of the transfer switch on the emergency side. Since 700 is no longer applied, that permission to omit that ground fault protection is gone. So those of you that have used that permission can no longer use that permission. You'll have to put ground fault
protection on the alternate source side. And if you put in one level you have got to put in 2 levels.

700.6D requires signalling whenever a ground fault occurs that is no longer required. How long will it take now for electricians and staff to know that a ground fault has occurred. 700.6 D also requires posting of the course of action that the employee must take when a ground fault occurs. That's no longer required.

700.10 A requires marking of boxes and enclosures containing emergency equipment. What happens when the first responders are there and they can't tell what is emergency equipment and what is not.

700.16 requires that emergency lighting continue in the on position until the normal lighting is back up and providing the normal level of light. So let's assume that you had a power outage, the emergency lighting comes back on, now the power comes back on. You wouldn't want the emergency lighting to go off until your normal source light is back up and running. That is no longer required. You could be in the dark until
your normal light is back up and running.

700.20. Limits access to emergency lighting controls to only authorized persons. We surely wouldn't want to allow access to patients and visitors. 700.20 also prohibits 3 and 4 way switches. You can imagine if you have a 4-way switch which one is the one which is off. No longer required.

700.4 B requires a portable or temporary alternate source whenever the emergency generators are out of service for major maintenance or repair, no longer required.

700.5 C requires an automatic transfer switch be mechanically held. Wouldn't be such a good idea if you lost your automatic transfer switch when the power went off.

NFPA 99 should have purview over requirements that are specific to healthcare. Not requirements like these that are applicable to all types of buildings that have emergency systems. Whether they are specifically called an emergency system or whether we call them something else. I suggest you vote for this certified amending motion.
MR. BELL: Thank you. Microphone No. 4.

MR. KOLINSKI: Mark Kolinski representing American Society of Hospital Engineers.

I am speaking in opposition to this proposal. I believe that over the years NFPA 99 and NFPA 110 have well served the healthcare industry. I believe there are indeed uniqueness to the healthcare industry and the emergency power supply system, and that in general the NFPA 99 and 110 have defined that very well by the committee has indeed attempted to define it even better with the motion or with the proposal that is already out there. I would like to vote against so that this can be maintained and that we have consistent reading of the code for the authority in the jurisdiction.

MR. BELL: Microphone 2.

MR. LABB: My name is Bill Labb Webb Fire Protection representing ASHRAE and I call the question.

THE FLOOR: Second.

MR. BELL: Motion to close debate made and second. All those in favor of closing debate
please raise your hand. Thank you. All those opposed. Motion fails.

THE FLOOR: (Indicatio).

MR. BELL: You're calling for a electronic vote? Are you asking for an electronic vote?

THE FLOOR: No.

MR. BELL: We are going to go to Microphone No. 6.

MR. MANCHE: Alan Manche, I'm speaking for Schneider Electric Square D Company. I stand in opposition to the motion and I believe there is a misperception with regard to how the NEC is utilized with healthcare facilities here and there has been some clarifications in 99 that gets us to establish what that system is supposed to look like in regard to Article 517 in the NEC. 517 in the NEC specifically references Article 700. You also have to understand that you don't exempt 700 from healthcare facilities just by simply making revisions to the systems here. So there is complete misunderstanding being presented here with regard how Chapter 700 are applied here so I ask for your
1 support in opposing this motion.

2 MR. BELL: Thank you. Microphone No.

3 5.

4 MR. LIPSTER: Thank you, Mr. Chairman,

5 Steve Lipster representing the International

6 Brotherhood of Electric Workers, and I speak for the

7 motion. Mr. Chairman, we are talking about Article

8 700 quite a bit and of course it does apply, but the

9 reality is that further on the action taken by the

10 electrical systems does reduce selective

11 coordination to .1 seconds so cuts the selected

12 coordination provision found in Article 700. The

13 entire premise for these issues raised by this and

14 other cams dealing with Chapter 5, the first one

15 being healthcare electrical systems are somehow

16 different from other electrical systems. They're

17 somehow more complex than other structures. This

18 may have been true 20 years ago but things have

19 definitely changed. In my area central Ohio there

20 are four financial centers five, data centers, and

21 one military installation that is far more complex

22 than any healthcare installation. We're talking

23 triple and quadruple redundancy. Every one of those
structures built in every NEC requirement including Article 700. Healthcare systems are no longer the most complex installations out there.

The second leg of this premise assumes 99 is a performance document for healthcare electrical systems and in fact any other NFPA code with broader jurisdiction. This is a grave responsibility. Responsibility I'm afraid my colleagues and myself on ELS have forgotten about.

In every single page where there is a conflict with the sister NFPA code the 99 requirements are less restrictive. Every single case. Allowing 99 to be published is created dangerous presence for our association. At lunch I made a quick scan of NFPA code and standards. There are at least 10 NFPA codes with the state occupancy jurisdictions just like 99. Everything from aircraft hangers to LP gas plane, to marinas. What happens when the dry cleaners NFPA 32 decides class work space as hazardous location. Their systems are different. They can’t compete in the global economy. It's too expensive. This is a dangerous float to go down. We must allow the codes standards broader
1 jurisdiction. Please support this cam.

2 MR. BELL: Thank you. Microphone 2.

3 MR. D'ANTONA: Partners HealthCare

4 System speaking against the motion. I didn't really

5 state it will the first time, but the intent was to

6 clarify confusion that exists. Some of which we're

7 seeing all those aforementioned requirements are

8 still bound under Article 517-26 because it says

9 essential electrical system must comply with all the

10 requirements of Article 700. This change of

11 definition has no effect whatsoever on that

12 requirement. The essential electrical system

13 comprises of the life safety critical equipment

14 branches of the hospital. All we were doing, all we

15 were trying to clarify is we were getting rid of a

16 subset that existed called the emergency system

17 which consisted only of the life safety and critical

18 branch, excludes equipment branch. By removing that

19 definition which had no requirements in NFPA 99

20 we're providing equity to all three systems and

21 because of the requirements of 517-26 which are not

22 changed by this proposal, all those systems have to

23 comply with 700. All the list of all different
requirements, they're still valid, still required in
517-26.

MR. BELL: Thank you. Microphone 1.

MR. FISKE: Thank you, Mr. Chairman.

William Fiske, Intertek speaking in favor of the
motion. Although this has been presented as the
NFPA 99 committee action has been presented as
clarification and terminology. The record taken as
a whole shows that it is not just clarification of
terminology, and if anything the move is more likely
to create confusion than to resolve it. Needs to be
made absolutely clear that the essential safety
requirement, the electric safety requirements by
NFPA 70. And there is no reason for any particular
occupancy to take any acceptance to that.


MR. WISEMAN: James Wiseman D Square
Schneider Electric, speaking in opposition of the
motion. I am a member of both DLS committee and the
Code Panel 15 covering Article 517 code. We
recognized when working in 517 revision a couple of
cycles ago we were having difficulty making
distinctions in areas that needed to be distinct
from what was in the 700 in some cases and realized it comes from the using the word emergency in cases that really have different meaning and really comes down to the critical branch of the essential electrical system having requirements that go beyond the requirements of Article 700. But if you talk about all of them as emergency systems you can't separate the two in any requirements. The article 700 requirements address egress and life safety or you can get in and out of a building in the case of emergency. Critical branch is addressing defending in place. You have people in the hospital you need to keep on the system so there are definitely different requirements. You need to have a way to address both of those. No intent to change the way from Article 700 where it is to life safety. We need to be able to tell where we're talking about that and where we're going beyond.

MR. BELL: Thank you. Microphone 3.

MR. CRNKO: Tim Crnko, Cooper Bussmann.

I'm in favor of this NITMAM. I'm confused. I heard the representative from ELS panel state that 517-26 and Chapter 15 for the NEC is going to keep the
emergency loads that are traditional emergency loads
in any other building complying with Article 700 of the code. Yet last code cycle the healthcare representatives in Panel 15 wanted to eliminate 517.26. So it just hangs by a thread. That's one of the problems here. My opinion, we've got multiple standards covering the same domain. My concern is there is electrical loads for emergency and all these large buildings including healthcare that should be handled by Article 700 of the code. But yet they are not going to be held accountable the same way within the healthcare facilities. My opinion should be in healthcare facilities comply for those loads that are for emergency lighting, egress lighting, pressurization for fire control and all the other loads, elevators for rescue workers and so forth, fire pumps, all that should comply with the appropriate codes with the appropriate articles in the code. And this basically cuts that off. And it builds in the future it can get worse. So again, I stand in favor of the NITMAM.


MR. LITROVICH: Thomas Litrovich, Eaton
Corporation, and I speak in opposition to the motion. We believe, I believe that it adds clarity to the industry. And I think we established that it's clear that 517.26 which references the essential electrical system does encompass all that the hospitals are required. So it does reference Article 700 so there is no issues there as well. But I do believe it does add clarity and it will considerably improve the applications in these applications.

MR. BELL: Thank you. Microphone 3.

MR. NASBY: Representing self again.

We've heard enough testimony.

MR. BELL: Speaking for the motion?

MR. NASBY: Sorry. Speaking for the motion. I think we've heard enough testimony to clearly indicate that there is confusion by this substantive change. If there had been confusion or need to further clarify emergency systems, the standard could have kept or should keep the definition of emergency systems not wash that term out of the standard but add perhaps subdivisions to it. It didn't do this so now we have again what
appear to be overlapping scopes or holes, and you've
heard the testimony that it's not clear which
portions of the NEC will or will not apply. So
again I think this introduces more confusion. I'm
not sure what confusion is trying to solve but it
has raised the level of confusion. Again thank you
for your consideration.


MR. CARON: Daniel Caron with BR Consulting Engineers in Boston and I'm also a member
of code-making panel 13. I don't see where the
confusion is.

MR. BELL: Speaking for or against?

MR. CARON: Speaking against the motion. I don't understand what the confusion is
between 517 or 99 referencing Article 700. 517
doesn't reference 240 yet over current protection is
required per Article 240. It doesn't represent the
grounding section. It doesn't reference the
requirements for motors, yet the requirements for
motors is still required as part of the code in a
hospital. So whether it does 525 references 700 or
whether it doesn't, Article 700 applies to the
emergency system and this is the emergency system we're talking about. I don't understand what the confusion is.

MR. BELL: Thank you. Microphone 1.

MR. MERRICK: Paul Merrick representing myself. Ladies and gentlemen, it seems pretty simple to me.

MR. BELL: For or against?

MR. MERRICK: I am standing at the mike and I am for this motion.

MR. BELL: We need that on the record.

Thank you.

MR. MERRICK: Thank you. It's pretty simple. Selective coordination is achievable.

Healthcare facilities is not the place to weaken the requirements. Thank you very much.

MR. BELL: Microphone 4.

MR. LEFFERT: Kevin Leffert, Eaton Corporation. I'm speaking against the motion. I would ask everyone to please make sure you can find your vote to the subject at hand. What we're talking about here is NFPA 99, wanting to delete the definition as used in their document. We've heard a
1 lot of discussions about Article 917, Article 700.

2 We're focused here and voting here now on the bit
3 that applies to only 99, and let's vote on that.
4 Thank you.

5 MR. BELL: Thank you. Microphone 5.

6 MR. OAKLEY: My name is George Oakley
7 and I'm speaking on behalf of myself.

8 MR. BELL: Speaking for or against the
9 motion?

10 MR. OAKLEY: I'm speaking for the
11 motion.

12 MR. BELL: Thank you.

13 MR. OAKLEY: In listening over the last
14 several years of the discussion going on relative to
15 this 99 versus the NEC, I thought I would go back
16 and look at my very first national electrical code
17 book, 1968 edition. I opened it up and looked in
18 the index for hospitals. There were two sections
19 referenced Article 517 which at that time dealt
20 solely with flammable anesthetics which is somewhat
21 passé today. The other reference was Article 700
22 emergency systems.

23 Now as we move from that period of time
to the current period of time, there were a number
of developments that moved along with science and
technology in reliability that expanded the
requirements for healthcare facilities. And they
have been proven by the test of time. As I look now
at what is being or trying to be changed, it seems
to obfuscate the entire issue. The gentlemen that
spoke against the motion most recently all the NEC
you have articles 430 you have over current
protection in 240 and these things are required.
Yes, you follow the code much like the issue of
selective coordination is defined in the code which
is over a full range of overcurrents. And by golly
look at your definition of what overcurrent is.
It's a ground fault, short circuit, or overload.
In the modification that is being made in NFPA 99,
it only addresses overloads which is the easiest
thing to coordinate for. But the one that is less
deleterious in the event of a serious fault.

So what we have here is a hodgepodge
definition changes and so forth. And I would
suggest to you that as a visitor to a hospital if
this goes through as proposed I am more at risk.
I'm not saying as a patient, as a visitor to a hospital than I am in here in this auditorium because of the modifications that are taking place in the hospital system relative to the 700 and life safety 101. I urge the membership in the interest of safety and just common logic to support the motion on the floor.


MR. MANCHE: Alan Manche Schneider Electric Square D speaking in opposition to the motion once again. Once again, there is a significant confusion here. We're talking about selective coordination. That has got to be one of it NITMAMs that comes up later in the program. We're sitting here trying to define what the system should look like. And the NFPA 99 committee has purview over establishing what that system looks like. So I urge you to oppose this particular motion and to support what the committee has done.

MR. BELL: Thank you. Microphone 3.

MR. HIRSCHLER: Marcelo Hirschler, I call the question.

MR. BELL: Motion to close debate has
been made and second. All those in favor of closing debate raise your hands. Thank you. All those opposed. Motion carries. Move directly to the vote. To return, on the motion to return the portion of report in form proposals 99-39, 99-40, and 99-108 and related comments 99-35, 99-36, 99-37, 99-123, and 99-124. All those in favor of the motion please raise your hand. Thank you. All those opposed. I am not going to rule on the hand vote. We'll go to an electronic voting on this. So everyone has a voting device. I'll call for a vote using the electronic voting device given to each of you. You have a red badge, you must have a red badge with the word member on the top of the voting to be voting on this. Let me remind you the vote either one in favor of the motion to accept or 2 oppose the motion. Or 3 abstain. Please vote. You have five seconds to vote and we're going to close the vote. We are closed. The voting close. No further voting. Motion fails. The next sequence number 99-7.
MR. GUIDA: Tom Guida, TJG Services

I am here to make a motion that my comment the 99-41 be accepted so that the definition of life safety system be reinstated with reference to article --

MR. BELL: There is a motion on the floor and then discuss it. Motion on the floor to accept comment 99-41. Is there a second?

THE FLOOR: Second.

MR. BELL: I hear a second. Please proceed.

MR. GUIDA: Thank you. I ask that the definition of life safety systems be reinstated with reference to Article 700 as follows: Life safety branch, a system consisting of feeders and branch circuits meeting the requirements of Article 700 of NFPA 90 intended to provide adequate power needs and ensure safety to patients and personnel that is automatically connected to alternate power sources during interruption of the normal power source.

The definition of life safety branch, adopted by NFPA panel -- Article 700 emergency
systems. If my motion it not accepted there will be no requirement -- for Article 700 treatment of life safety circuits in healthcare facilities. The argument given by the proponents is that the change they propose avoid confusion with the term emergency system. As used in Article 700 and to properly sort out which portions of the essential electrical system the requirement of NEC 700 apply. If clarity is all that is required as to where Article 700 applies in hospitals, why start by completely eliminating any requirement at all. It does not make sense. The argument made by those opposed makes a lot more sense. Life safety circuits traditionally practically and rightfully fall under Article 700 of the National Electric Code. I urge that my motion be accepted and turn down the definition that does not include references to Article 700. Please vote in favor of my motion.

MR. BELL: Thank you. Mr. Erickson.

MR. ERICKSON: Once again I'd like Mr. D'Antona a member of the ELS Technical Committee address this.

MR. D'ANTONA: Thank you, Mr. Chairman.
Jason D'Antona, Partners Health Care speaking on behalf of the committee. The requirements of Article 700 applies to life safety system are covered under Article 917.26.


MR. DAGENAIS: Dave Dagenais speaking on behalf of the healthcare section in opposition of the motion. This morning at the healthcare executive board meeting the membership and the board voted to oppose this motion. The healthcare section believes by inserting this into the definition the specific requirement to comply with 700 NFPA 70 is not standards format. Additionally by inserting this within the definition it could in fact imply that that is the only branch that 700 would have to conform with. There has never been an intention that these branch labeling life safety critical branch or equipment would not fall within the 700 realm. This further confuses the issue by placing this requirement within the definition. The healthcare section urges you to vote against this motion.

MR. BELL: Thank you. Microphone 1.
MR. CONRAD: James Conrad with RS Safety Warren Cable and I speak in favor of the motion on the floor. We keep hearing from the opposition that 517-26 references Article 700 but yet last cycle there was a motion to remove that reference and it failed when 99 got sent back to committee. This makes it clear that you do have to comply with Article 700 for the emergency system when it is an emergency system, and I urge you to support this motion. Thank you.


MR. HIRSCHLER: Marcelo Hirschler, speaking against the motion. I am the chairman of the NFPA Technical Advisory Committee on the terminology. I am not speaking on behalf of the committee. The NFPA says requirement shall not be placed in definition. This include requirement definition. 2, as the committee pointed out the definition in National Electric Code NFPA 70 is an extract of NFPA 99. If this proposal were accepted we would have to different definitions. Again this is in opposition to the concept of Standards Council requiring uniformity of definition. I urge you to
disapprove this motion.

MR. BELL: Thank you. Microphone 5.

VOICE: For the motion. As was discussed before, I'm not sure why hospital are different than other facilities that will not adopt Article 700. Those are emergency systems and we're talking about immobilized patients and other systems need to be part of the emergency systems.

So please vote for the motion.

MR. BELL: Microphone 6.

MR. BEEBE: Chad Beebe with the American Society for Healthcare Engineers speaking against the motion. We've just heard microphone 1 that a few years back there was a proposal made that failed. It was going to take the reference to 700 out of 517. That failed. Therefore it's in there.

So I'm not sure exactly what we're debating anymore.

You heard from Marcelo that you can't actually reference another NFPA standard or article in a definition. So I urge you to vote against the motion.

MR. BELL: Thank you. Mr. Erickson?

MR. ERICKSON: No further comments.
Thank you.

MR. BELL: Seeing no one else at the microphone we're going to move to the vote on the motion to accept comment 99-41. All those in favor please raise your hands. Thank you. All those opposed. Motion fails.

Move to motion in sequence number 99-8.

Microphone 5.

MR. LIPSCHULTZ: My name is Alan Lipschultz and I am the maker of 99-8, and I move that this body accept comment number 99-78.

MR. BELL: The motion is to accept comment 99-78. Is there a second?

THE FLOOR: Second.

MR. BELL: I hear a second. Please proceed.

MR. LIPSCHULTZ: I am the director of clinical engineering at Christiana Health Care Services in Delaware. I'm a profession engineer and certified clinical engineer and certified safety professional. I have been a member of the NFPA 76 V committee dealing with this issue which then got merge into NFPA 99 for a total of 35 years. I was
on present in 76 B committee when the current
definition of what location was drafted 30 years
ago. It was never intended for an operating room to
be a wet location.

This is an important topic not just
inclusion of operating rooms in the wet locations
but what really counts is that isolated power or
ground fault circuit interrupters which are required
for wet locations would then be incorporated into
all operating rooms. If anyone doubts as to whether
the issue really is isolated power, I would go back
to what the technical committee itself said in the
current 2009 report and proposals, specifically
referring to their proposal that they generated
99-68 where they said, "Essential that modern
operating rooms have the added protection of
isolated power or ground fault circuit interrupters.
This would be accomplished by recognizing operating
room as wet locations."

I stand today representing both the
association for the advancement of medical
instrumentation and the American College of Clinical
Engineering and basic reasoning is that the
1 committee has not provided significant or any
2 rationale as to why they want to make operating
3 rooms a wet location. In my view they have violated
4 the regulations governing committee projects,
5 Section 4.4.6.3 of those regulations state that the
6 technical committee's action on, and I'm
7 paraphrasing a little bit, on rejected comments
8 shall "Include a statement preferably technical in
9 nature on the reason for the technical committee
10 action. Such statement shall be sufficiently
11 detailed so as to convey the technical committee's
12 rationale for action. The technical committee
13 action each comment shall be in the form suitable
14 for publication with each comment constitute the
15 report on comments."
16 In this particular case, the committee
17 rejected my proposal. Their only substantiation
18 was, "The committee supports the concept that
19 operating rooms are often wet location wet
20 procedural location but has included appropriation
21 for conducting a risk assessment determine
22 otherwise. The committee concurs that where a risk
23 assessment concludes an operating room is not a wet
procedure location such designation is not necessary."

I do not represent ECRI Institute.

ECRI Institute, for those of you not aware of it, ECRI Institute is like consumer's union a nonprofit organization that deals with technology issues within postural article in health devices journal published in June 2001 includes the following statement. ECRI Institute position. Despite over 40 years of controversy that continues to be no documented evidence of events that justify installation of isolated power in all operating rooms. And the years of ground fault circuit interrupter in operating rooms can be dangerous if they cut off the power for critical or life support devices. In addition, medical device designs have become saver. In hospitals have implemented safety focus equipment management programs thus reducing electrical safety risk. Therefore, ECRI Institute urges NFPA not to designate operating rooms as wet locations in the updated NFPA 99. Thank you. I urge you to accept this proposal.

MR. BELL: Thank you. Mr. Erickson.
MR. ERICKSON: Once again turning it over to Jason D'Antona.

MR. D'ANTONA: Thank you, Mr. Chairman.

Jason D'Antona Partners Health Care representing the AGALS. AGALS Committee debated this issue for 6 years essentially through two cycles. Listened to all sides of the argument whether the OR should be considered a wet location or not. The consensus we came up with was essentially to empower the institutions to make the decision whether it should be a wet location by needs of risk assessment. We raised the default level of the OR not being wet locations. They are wet location unless the institution can prove otherwise through risk assessment.

What we were finding in a lot of cases the institutions were not actually making the decisions. The decisions were being made by architects and engineers. And we thought the most informed party to make the decision about whether it should be a wet location or not is the institution itself.

MR. BELL: Thank you. Microphone 3.
MR. SCHIPPER: My name is Tom Schipper

and I'm speaking for the motion on behalf of ASHAE.

I have been involved with this issue since 1977.

And the history of it shows that because of the
elimination of flammable anesthetics, some of the
earlier systems that we had in place to protect
against explosions and fires from those anesthetic
needed a new reason for existence. And among those
were the humidity controls, isolated power.

Isolated power at that time moved to a position of
saying well it's needed for electrical safety. It
took us several years to work through that and
determine that not only for microshock it was not
effective, macroshock as well, for macroshot as well
it does not give an effective means of protection.

The next thing that occurred was well,
it's needed because ORs are wet locations. You
heard several indications that hospitals do not
indicate OR as wet locations. Today, very few
hospital OR rooms are built with a floor drain
because they do not have significant amounts of
water in them. They do have water, they do have wet
procedures, but these are controlled. In trying to
determine whether or not physicians consider these
things as wet locations, my studies in talking to
several of them says wet on the floor? As soon as
there is something that is spilled we clean it up.
We’re more concerned about the issue of slips in
relationship to our procedures than we are to any
kind of shock.

Since they are not built as wet
locations and spills are responded to for reasons
other than electrical safety, and the fact that
procedures today that are more wet than others
usually have their contents collected as medical
waste and leaves the room less wet than they were
10 years ago, I request the floor to vote for this
motion. Thank you.


MR. EHRENWERTH: Jan Ehrenwerth,
anesthesiologist. I represent the 45 thousand
members of the American society of Anesthesiology.
We strongly oppose this motion. The people who
spoke before me obviously have no experience
whatsoever in working in an OR. I have worked there
for over 30 years. I know what goes on in an OR. I
I know that today there is more electrical equipment, there is more chances of electrical equipment having fault and the amount of water on the floor is simply astronomical. And these people don't have a clue. The stuff is not mopped up. The systems collecting it are poor, absolutely ridiculous that this has any tracks at all. Operating rooms are wet locations. The committee has voted on 4 occasions, 4 occasions the electrical system committee to support this by an overwhelming margin, 17 to 2 was the last vote. We have considered this for over 20 hours, 20 hours debated all the issues. We've come to a very reasonable conclusion that we allow the default to be a wet location, if the institution wants to change that that is fine. They can do a risk assessment with the clinicians. They can include isolated power. They can include GFCIs, they can include a combination. We have very carefully done this. Operating rooms consist of patients who can't protect themselves because they are anesthetized. If they come in contact with an energized source they can't pull away. We no longer have operating rooms that are for specific purposes. Any operating
1 room can be used for any purpose at any given time.
2 We have in our particular operating rooms virtually
3 every OR for an open heart procedure and emergency
4 even had to use an ambulatory OR for an open heart
5 procedure. The NFPA contracted with Expon to do
6 research study on this that presented their findings
7 this morning. Clearly they found that there is
8 underreporting of incident. They found incidents of
9 electrical accidents. They stated that the
10 International Electric Technical Commission has
11 supported isolated power. It's the standard all
12 over Europe. It's the standard in South America.
13 And they found that there are high volumes of fluids
14 on the floor. Take something like a knee
15 arthroscopy 6 to 12,000 cc's is frequently used and
16 a great deal of that ending up on the floor.
17 So let's look at it realistically.
18 Let's look at it, why is Kaiser and some of these
19 places opposed to this. Mostly it's cost. Let's be
20 realistic. It's cost. Well, I went and looked at,
21 let's look at the real cost. Let's look to a
22 reliable system, what is the cost, the incremental
23 cost of putting in a system of isolated power, not
the GFCI incremental cost and I then added about 50 percent. About 22, $23,000. I looked at the average number of cases in our ORs, and I looked at that, multiplied out by the year and then over 30-year life span in OR. it comes to a dollar and 3 cents a case. $1.03 a case to put in essential electrical safety protection. This is ridiculous that we're even debating this. We waste a dollar a minute, waste a dollar a minute on every case I have ever been involved in and usually more. How can we possibly think that we would have less electrical safety protection in an operating room with dozens and dozens of pieces of high voltage equipment connected to defenseless patient with large volumes of fluid on the floor, how can we have less electrical safety protection than our bathroom.

Please reject this motion please support the Technical Committee which has spent many, many hours debating this and have come up with a very reasonable proposal and appreciate your support.

MR. BELL: Thank you. Microphone 1.

MR. FISKE: Thank you, Mr. Chairman, I am William Fiske speaking in favor of the motion.
The gentleman representing the health care systems committee indicated that the decisions are largely made by architects and design professionals when in fact properly belong with the institution that is operating the facility. And while that may be true. The problem is by the time the institution conducts its risk assessment based on what is actually happening there, the installation has already taken place and it's extremely difficult and expensive to change it. So what it comes down to is do you have the right at the design phase.


MR. BARKER: That's me. Steve Barker. I am the incoming delegate from the American Society of Anesthesiology Organization, and this is my first meeting. I'm very impressed by the caliber of the science here by the way you conduct business and by how smart all of these people are. I provided a unique and somewhat different perspective and I think I have to explain that in about 20 seconds. I apologize if I sound like I'm bragging. I'm not really. I have a Ph.D. in fluid dynamics which includes the science of combustion of course from a
place called the California Institute of Technology.

I taught that subject for a number of years at places including UCLA. I then underwent my first mid life crisis and went to school and for the past 25 years I have been an anesthesiologist. I'm now the chairman of the Department of Anesthesiology at the University of Arizona. So I'm a guy who knows something about fluids who works in an operating room everyday. And by the way I would like to urge this body to use terminology properly. Fluids refers to both liquid and gases, in fact quoting from Webster, a fluid is a substance as a liquid or gas tending to flow or conform to the outline of its container. So when we're talking about liquids on the floor of an operating room we need to say liquid not fluids. I practiced at the University Medical Center in Tucson Arizona. You may recall we had a little problem on January 8th in Tucson. 19 people were shot. 14 of them came to our operating room.

We're the only Level 1 trauma center in the city. 8 of those 14 to come immediately to the operating room for major trauma operations. We brought in 20 anesthesiologists on a Saturday afternoon. What is
my? Point they didn't come to operating rooms that
were designated trauma rooms or designated wet
rooms. They came into the heart room, hand room,
the ortho room, whatever room was opened we used
most of our operating rooms that day. There is no
such thing as a dry operating room. There are dry
cases that will give you that but there are no dry
operating rooms. You don't know when you build and
design and certify an operating room what cases is
going to be used for the life of that room. And on
that particular day in January we did wet cases,
very wet cases in all of our rooms.

So to conclude I'll just say are there
conductive liquids on the floor in operating rooms?
Yes, absolutely. It can happen in any room at any
time. Are there alternate electrical pathways
available to both patients and staff? Yes,
absolutely. Do we connect conductive pathways to
our patients? Yes, we connect an electric cautery
grounding pads to just about every patient in the
operating room. Is there equipment in there that
can provide high voltage especially the liquids are
poured onto or into it? Yes, absolutely. Safety is
risk mitigation and you don't have to electrocute somebody to prove the point that there are electrical hazards with liquids in the operating room. I urge any of you who doubt this to please come visit our operating suite in Tucson. I would be glad to give you a tour. I'll show you the ortho room where the ortho pods everyday, that's what we lovingly call our orthopedic surgeons, come to work in their operating room in hip high boots. That's what they wear. They look like they're going fishing when they're coming into the operating room for a joint replacement or arthroscopy. Wet cases.

So my point is operating rooms are wetter than you think. It's not like what you see on TV and it's not like what the data show in the literature. Come visit an operating room and see what goes on there. And I think you'll be convinced. I speak against the motion and thanks for listening.

MR. BELL: Thank you. Microphone 5.

MR. KING: My name is Don King and I speak on behalf the Kaiser Permanente for this motion. Kaiser Permanente provides health care
service to 8.9 million people across the country.

Currently to do that we operate 600 operating rooms and perform on almost three-quarters of a million surgical patient. So we're intently interested in this issue. Kaiser Permanente itself is interested in providing safe environment for the practice of medicine and helping our members stay well.

Additionally we want the facility to be open and accessible for that health care. So we deal with risk management risk mitigation and omitting hazards on a daily basis. We took a look at the data surrounding this issue. We talked to people, talked to other professional associations about it and we're convinced that the data is just not there to demonstrate the need for OR to be globally classified as wet locations. The findings of our research within our own organizational aligned with those, the Emergency Care Research Institute, the Association for the Advancement of Medical Instrumentation, the American College of Clinical Engineers. A C C E, and others. Our research has shown us that less than 5 percent of the cases being performed in our OR actually result in what we would
classify as a wet location. And in those locations we believe it's appropriate to do a risk assessment and determine that isolated power or other measures might help us mitigate and manage that risk. We're very concerned about the current pressures in the healthcare environment causing all these healthcare organizations to change their thinking about the way they do business and where they focus their their sources. We are more determined to focus our resources on those items that we believe mitigate management risk and improve the health of the communities we serve.

The issue was brought up about cost. Well that's interesting. I heard interesting discussion about the data, about practice, talk about clinical practice, and talk about cost. As most of you are aware, the technology of clinical practice has advanced along with technology of fire protection and electrical systems not only in this country but around the world. What we see in the operating rooms we term minimal invasive surgery or endoscopic procedures. And these procedures are relatively small incisions made in the patient,
relatively low loss of body fluids, relatively small
incision and very complex procedures can be
performed within these very small incisions. By our
count almost half the surgical procedures we perform
involve this type of minimally invasive procedure.
Again, this results in less than 5 percent of our
cases relating in what we would call a location that
could be considered wet.

So we took a look at cost. Now we have
600 operating ORs and by the end of 2013 we'll have
constructed an additional 100, so we're somewhat
familiar with the cost of constructing a OR and what
it takes to equip it. Additionally most of you in
the facility industry know, that first cost
acquisition cost is only 20 percent of the total
cost of ownership of any technology. And when we
translate those costs, the capital cost and the
other uses of the money, those capital costs can
cover 1,500 exam rooms that would improve
accessibility for patient care. If you look at
operating cost associated with supporting these
devices across the life cycle and we believe
isolated power systems have a 30 years life cycle,
those operating systems are sufficient to provide
care prenatal care for over 25 hundred new mothers
every year so we're very concerned about what the
data shows our healthcare efforts and resources
should be devoted to and what kind of risk should be
prevented versus the kind of impact we can have on
the global health of the community for the members
that we serve. So we stand solid for this motion.
Thank you.


MR. VAN KERCKHOVE: Keith Van Kerckhove, Post Global LifeLink, Incorporated and
speaking in opposition to the motion. I believe
this motion is successful will drastically reduce
the effectiveness. The current language in 2005
version of NFPA 99 regarding the termination of wet
procedure locations has been a consistent source of
confusion and clear guidance on this issue. Under
the current rule of the governing body of the
facility establish a blanket policy that none of the
ORs were ever wet procedure locations, without ever
performing an official analysis or seeking input
from those individuals that are most familiar with
the intimacies of OR procedures. In fact some would
say if it's not required by code, then we don't feel
it's necessary. End of story. No justification, no
inclusion of input from other stakeholders.
Recognizing this fact the Technical Committee has
rightly chosen to apply a higher standard to
establish default designation for basis for design
of new facility. The language adopted overwhelming
by the Technical Committee represents compromise
from both sides of the issue and does two important
things. First it requires healthcare facility to
formally review the intended use of newly built or
renovated operating rooms to determine the
likelihood that a procedure could result in a
substantial amount of fluid being released around
patients or staff causing an elevated risk of
electric shock.
Secondly it suggests in the form of
anecdote that other stakeholders including
clinicians, biomedical engineers and facility safety
staff be consulted as part of the risk assessment.
Individual facilities are still free to determine
that a particular operating room is not a wet
location just as they can in the current position of 99. The only difference is that this determination must now come through a thoughtful instruction analysis.

This is entirely consistent with the overall risk approach of 99 and there is no undue burden placed on the facility by this requirement. Technical Committee consistently voted to confirm the concept operating rooms are wet procedure locations over the last 4 years. Each time the vote was an overwhelming majority. When this issue was challenged by a motion during the last cycle members of this body voted to support the Technical Committee stance.

In attempt to allay concerns voiced by opponents of the language various compromises have been agreed to resulting in the consensus language before us today. Each time the committee has been clear. The evidence indicates substantial amounts of conductive fluids are released around patient or staff causing an elevated risk of electric shock.

This is corroborated by third party independent research study sponsored by NFPA which was analyzed
the available date and quantifying the hazard associated with operating rooms.

A summary of these findings were presented during a session this morning. And there were several conclusions that support that operating rooms are wet areas. Cardiovascular, thoracic, obstetrical, and orthopedic surgery are the most prevalent procedure performed today. All of these procedures involve very large volumes of blood loss and/or irrigation, up to 1.2 liters. In some instances research indicated that blood was equalling pooled in the work area and on the patient and in the presence of electric medical equipment. Blood runoff has been reported to pool in the shoes of surgical team members and 13 percent of major operations. Splashes of fluid occur on average 50 to a hundred percent of the time for these types of major procedures. The draft risk assessment methodology proposed by this report predicts 100 percent likelihood personnel would be exposed to liquid in high utilization ORs even when small volume of fluid are present over the course of an annual operation. Furthermore the study
acknowledges that up to 96 percent of injuries and errors go unreported. Many have asked why we should specifically designate OR by default I would answer by saying there is clear evidence which is presented to the Technical Committee that illustrates reality that operating rooms are in fact subject to substantial conductive fluid during routine procedure. As manufacturer of power safety equipment dedicated to improve patient safety.

MR. BELL: 30 days.

MR. VAN KERCKHOVE: -- as well as individual concern with the level afforded reasonable margin of protection when under the care of hospital. I strongly agree with the concept an operating room should be wet procedure location and urge those of you here today to vote to set a clear standard by rejecting this motion.

MR. BELL: Thank you. Microphone 3.

MR. COLLINS: John Collins. I have been a clinical engineer since 1970. I spent 20 years in operating rooms at North Western Memorial Hospital, cardiac care, cardiovascular surgery and neurosurgery. I can't recall ever
seeing any of those locations wet at any time. As far as electrical safety, the origin of the electrical safety problem goes way back to 1968 an article by Brunner in anesthesia which has been mistakenly over the years an example of electrocution in hospitals. Doctor Brunner referenced patients that had catheters in their hearts as being susceptible to electric shock. There was never any mention of medical equipment outside of that susceptible to electric shock. Subsequently, i.e. 60201 has been in force for about 15, 20 years which manufacturers used to make sure their equipment is safe to operate. Third, and finally, I been investigating the NFPA incident report since they started in 1991. I have all the incident reports on my computer. I use it in risk assessment of clinical equipment. And since 1991 well over a million incidents, I do not find any incident of electric shock in patients. Thank you.

MR. BELL: Thank you. Microphone 5.

MR. JEWELL: Bill Jewel with Life Point Hospitals. I've worked 17 years in hospitals, 5 years continuously up in the operating room. We
had open heart surgery procedures orthopedic
vascular, general procedures, etcetera. Yes, I
agree that the orthopedic procedures are rather wet,
however all of the other different kinds of
procedures are very dry with limited fluids. Being
exposed on the floors, there is lots of technology
to take the fluids out of the patient's site and
also seal savers are used in open heart procedures
to capture blood, return to reservoir, spin it and
gave it back to the patient. There are multiple
devices or orthopedic cases where the fluid is on
the floor are immediately sucked up and gotten out
of the danger area. Since the '70s there has also
been great improvements in device safety, medical
device safety which limit the risk of electrical
shock in patients and also with better design in
microprocessors in current technology. They have a
button or electric fault circuit protection which
will shut down the device in today's equipment.
So given all that information, very low
amount of procedures. Mainly orthopedic where you
have a lot of fluids involved with arthroscopy, I
support the proposal. Thank you.
MR. BELL: Microphone 2.

MR. BLACK: Art Black, I call the question.

MR. BELL: Motion on the floor is to close debate. Do I hear a second?

THE FLOOR: Second.

MR. BELL: All those in favor of closing debate raise your hand. Thank you. All those opposed. Motion passes. We'll move directly to the vote to accept comment 99-78. All those in favor for the motion please raise your hand. Thank you. All those opposed. Motion fails.

Move on to motion sequence number 99-9 microphone 5.

MR. DANIEL: Thank you, Mr. Chair. My name is Mike Daniel, Daniel Consulting Limited. I am speaking for myself on this particular issue. I would like to move acceptance for my comment 99-217.

MR. BELL: Motion on the floor to accept comment 99-217. Do I hear a second.

THE FLOOR: Second.

MR. BELL: Please proceed.

MR. DANIEL: I want to make sure that
it's clear that this motion is not about whether any one particular location is or is not a wet procedure location. We've heard enough discussion about that. What this motion does is mandate that a risk assessment process take place to specifically delineate all wet procedure locations as opposed to sending a wrong or mixed message by singling out one specific area in the document. It also places responsibility for making determination where it belongs on the governing body of the healthcare facility. By delineating one specific area as a wet procedure location in the document, we are sending a mixed message to the facility creating confusion and potentially setting a dangerous precedent. Is this the only area that should be considered? Are there others, if so what are they? Do we now follow the future by designated general carriers and critical carriers for the healthcare facility? No. It is inappropriate for us to be making these decisions.

This motion mandates the mechanism for the evaluation and clearly delineates the responsible to make a determination not just for one specific area but for all. As a final note of
clarification, this motion replaces the text in the
ROP with the following. The healthcare governing
body shall conduct a risk assessment to specifically
delineate wet procedure locations. Given that the
comment only addresses the body of the text, the
annex notes delineate who should be involved in the
assessment would be retained.

I strongly urge you to support the
motion on the floor mandating and all encompassing
assessment and placing the responsibility with the
organization where it belongs. Thank you.

MR. BELL: Thank you. Mr. Erickson.

MR. ERICKSON: Once again I'd like to
recognize Jason D'Antona.

MR. D'ANTONA: Partners Healthcare,
speaking on behalf of the committee. The committee
was asked to deliberate and look at operating rooms
specifically. There was no evidence presented
before us that indicated that other areas of the
institution or hospital were concerned. We spent
considerable time deliberating this issue over two
code cycles, many hours, and we came to a consensus
of opinion on multiple votes that adding a
1 requirement for risk assessment defaulting the OR
2 wet location for a risk assessment to alleviate the
3 wet location was not a -- health care organizations
4 today are asked to do risk assessment for any kind
5 of work construction activities even maintenance
6 activities. We didn't think it was an onus
7 requirement to ask them to do a risk assessment on
8 establishing whether or not OR is a wet location or
9 not.

10 MR. BELL: Thank you. Microphone 3.
11 MR. DAGENAIS: Dave Dagenais speaking
12 on behalf of New England Society of Healthcare
13 Engineers. New England Society of Healthcare
14 Engineers executive board meeting after polling the
15 membership voted to support this motion. New
16 England Society of Healthcare Engineers feel this
17 approach of informing users of the document that it
18 is a requirement to evaluate all potential wet
19 procedure locations is a better approach as to
20 opposed to defining operating rooms. We think this
21 gives a clearer message that the expectation is to
22 evaluate all potential wet procedure locations and
23 to manage that evaluation through the annex note
which would indicate who would conduct that risk assessment. This approach clearly has the potential to go beyond the operating rooms and gives a much clearer expectation. The New England Society of Healthcare Engineers urges everyone to support this motion.


MR. EHRENWERTH: Jan Ehrenwerth, American Society of Anesthesiologists. Let's be very clear here. This is just a failed attempt to overturn what they couldn't do in the previous motion. This removes all of the language that we just rejected -- that the technical committee put in, and it goes back to where we were. Risk assessment stuff doesn't work. We've proven it over and over again. If the hospital has other areas that they need to assess I'm sure they are going to do it. If we have a burn tank that we're dunking patients in I'm sure they are going to put a GFIC on that. Unbelievably simple. We just spent an enormous amount of time rejecting the previous motion. We need to reject this because it is going to undo everything that we just did and undo
everything that the committee did. There is no confusion here. There is no confusion among the Technical Committee. The vote was 19 to 0 against this comment 99.217. 19 to 0. Just reverses everything we did and it has no business being accepted. I urge you strongly to vote against this motion. Thank you.

MR. BELL: Microphone 3.

MR. DAGENAIS: With the American Society for Healthcare Engineers, and I'm speaking in support of the motion on the floor. The difference between the one you just heard simply just deleted all the information and left it kind of open. This current motion actually requires the risk assessment what is what the anesthesiologists wanted. They kept mentioning about having data and how proud the group are that they are we are for having data before we have decision. We have the data in this case and there is nothing that shows there is a problem, really what is the reason that we need to do to address it in that manner. Let's take this as suggested in this proposal, and let's let the healthcare governing body decide where the
risk assessment says that it's a wet location. Let them apply it to areas outside of operating rooms and not just tie it to the operating rooms.

One of the other points made was that there are certain procedures that create wet locations. Some hospitals don't do those procedures. So why would we be calling them all wet locations just carte blanche when it should be up to the facility to decide. I urge to you support the motion.

MR. BELL: Microphone 4.

MR. LATHROP: Jim Lathrop, Koffel Associates speaking for myself just a question of point of information on what the motion is, sir, because I know Mike explained it but I still keep looking at the ROC and the ROC 99-217 which the motion is on says add new text read as follows, does not say replace the current text says add new text. Mike said this is to replace it, but the motion that I see says to add it. Is there an errata that we should be looking at?

MR. BELL: Give me a moment here.

We're check into that. We have a question for the
maker of this motion.

MR. DANIEL: Yes, sir.

MR. BELL: Is it your intent that the
text in 99-9 sequence number 99-9 replaces the text
in 4.3.2.2.8.3 in 99-8.

MR. DANIEL: That is correct and that
was the initial comment public comment that was
submitted and somehow the language was revised when
it was put in to say add. It's to replace the ROP
language. And I did check with Standards Council,
with representatives prior to this session to make
sure that was acceptable, and that would be the way
it would be interpreted. Does that clarify to
answer your question.

MR. LATHROP: I wasn't speaking for or
against. I just wanted to make it crystal clear
what was going on.

MR. BELL: Thank you. Microphone 5.

MR. MAKER: Paul Maker, Arkansas AHJ
speaking for the amendment. I'm a professional
engineer and master electrician past 30 years.

There appears to be the idea that there is a
presumption of guilt until proven innocence in
regard to the existing approach of this amendment would correct that. I’m sadden to see that this body would move in the direction that it is in spite of no significant evidence being provided to the contrary, that NFPA has historically been reactive to end and a history of problems and correcting those problems and I ask where are they. I appreciate the approach of looking at this from the simple context of a wet location, but, unfortunately the focus should be from the electrical standpoint and not on whether it's a wet location or not, and the electrical hazard that is involved, the equipment that is used in the ORs are of such quality if they're not of quality to be used in the environment that they're being used in, we need to get some new equipment in the OR. Thank you.


MR. BREWSTER: Thank you, Mr. Chair.

Steve Brewster speaking for myself and I'm rising against the motion. Brothers and sisters on the floor I feel your pain. I feel it distinctly. As a principal member of ELS we debated this for 20 hours it was more like 30 or 35. We heard from the
practitioners who have a very strong story. We heard from the engineers and administrators who have an equally strong story. The present language you have in the document today is purely a compromised position between the two, duked out after a long debate. And I'd really like to see it fly to a code cycle to see if it goes. Do you think? Thank you Mr. Chairman.

MR. BELL: Microphone 3.

MR. MANTON: Thank you, Mr. Chairman

Dean Manton, Providence Healthcare Oregon speaking on behalf of the healthcare section. During our board and business meeting we voted to support the motion on the floor.


MR. TREMBLAY: Marcel Tremblay. The company I'm with is Venture Incorporated. Our company has --

MR. BELL: Speaking for or against the motion?

MR. TREMBLAY: Oppose the motion.

MR. BELL: Thank you.

MR. TREMBLAY: Our company has decades
of national and international experience addressing electrical safety issues and operating room environment both from the standpoint of smoke hazard protection and power continuity. In our opinion, this motion is a clever but what appears to be transparent attempt to circumvent the very special and demanding operating room requirements. As spelled out in proposal number 99-96 and overwhelmingly accepted by the Technical Committee on electrical system. Therefore, I wholeheartedly recommend that the members vote to reject the motion. Thank you.

MR. BELL: Thank you. Microphone 3.

MR. MILL: My name is George Mill with the Joint Commission on Healthcare, and I vote move in favor. The Joint Commission on Healthcare we have roughly 5,600 hospitals in the United States, military bases overseas. We base many of our decisions on risk assessment processes, and the idea of language that we see wet location without any backup to that system does not seem to be a prudent or proper way to do business. We have what we call -- alert where we track incidents that happen in
healthcare. There have been no slips, trips, falls or electrical hazards identified related to these wet locations. So the idea of using a risk assessment to provide the organization the ability to declare rooms that are not going to be wet as dry or not wet locations just makes good sense. And I don't understand the reason for an opposition to what Mr. Daniel has proposed. Makes good sense to us, the Joint Commission. The way which we have been doing business in all areas with risk assessment, and I urge you to vote in favor of this motion on the floor.


MR. VAN KERCKHOVE: Keith Van Kerckhove, again speaking against the motion. Two concerns. The first is that the document is provided by the Technical Committee does allow for risk assessment. It does not preclude the use of risk assessment to determine other areas of the hospital as wet location. My second concern is, as I read the comment it would appear to me that it eliminates the annex note that was provided by the previous section and annex 4.3.2.2.8.3 in which they
describe in conducting risk assessment healthcare
governing body should consult with all relevant parties including but not limited to clinicians, bioengineering staff and facility engineering staff.
I would question whether this motion would remove that from the document.

MR. BELL: Thank you. Microphone 2.

MR. HIRSCHLER: Marcello Hirschler, GBH International, and I call the question.

THE FLOOR: Second.

MR. BELL: Hold on just one second. We haven't had a clarification request of the submitter. Was it your intent to keep the annex material or not?

MR. DANIEL: Absolutely. The intent of this is to keep the annex notes saying who does it and to avoid any tunnel vision.

MR. BELL: We're just asking that for clarification purposes we're going to move we have a motion on the floor to close debate. Do I hear a second?

THE FLOOR: Second.

MR. BELL: I hear a second. All those
in favor of closing debate please raise your hand.

Thank you. All those opposed. Motion passes.

Moving directly to the vote which is to accept comment 99-217. All those in favor of accepting comment 99-217 please raise your hand.

Thank you. All those opposed. Motion fails.

We are going to move on to motion sequence number 99-10 through 99-14, and I want to point out here that these are related motions so as noted in the motions committee report action on any one of these motions will serve as the represented motion for the other related motions.

THE FLOOR: I was requesting an electronic vote of last count.

MR. BELL: I didn't see that. We can move to an electronic vote if you want. We'll move to electronic vote.

Well now call --

THE FLOOR: Point of order, Mr. Chairman.

MR. BELL: Yes.

THE FLOOR: The chair has already ruled on this. I think it's too late for an electronic
vote.

THE FLOOR: I agree.

MR. BELL: I am going to go ahead and grant the request for an electronic vote. I now call for the vote using the electronic voting devices given to the voting members. You must have a red badge with the word member on the top to be voting. I remind you that you vote either one in favor of the motion to accept or 2 to be opposed and 3 to abstain.

So I now request that you vote.

5 seconds. Voting is now closed.

THE FLOOR: Good call.

MR. BELL: Motion fails.

Before I was interrupted, we were talking about -- if you are going to request an electronic vote you need to do that immediately and go up to the microphone. I didn't hear anything.

So moving to motion sequence No. 99-10 through 99-14. As I was saying these are related motions. Any one of these motions will serve as a representative of the motion for the others. I'm looking for a motion on one of these motions.
MR. ALLISON: I'm Malcolm Allison. I'm representing the National Electrical Fuse Association and I move to accept my comment 99-115 which seeks to reject proposal 99-107.

MR. BELL: The motion is to accept comment 99-115. Is there a second?

THE FLOOR: Second.

MR. BELL: I here a second. Please proceed.

MR. ALLISON: Thank you. Let me begin with an explanation of the concept of selective coordination. It's the isolation of electrical problem specifically electric overcurrent so that only the overcurrent device immediately the problem open. No additional larger upstream device is open. An example of a selectively coordinated system is an installation where a ground fault perhaps at a light fixture opens only 120 amps circuit breaker does not open the 225 amp panel board main or any other upstream overcurrent device. So only one circuit is de-energized. In a nonselectively coordinated system the ground fault in the light fixture might
take out not only the 120 amp breaker but also the
225 main as well. De-energize all the circuits by
that 225 amp panel. That is the lack of selective
coordination. When it happens in an office building
there isn’t much at stake. When it happens in the
healthcare facility probably a lot more at stake.
Well the NEC selective coordination requirement
covers all levels of overcurrents. This NFPA 99 as
written calls for selective coordination with
overcurrents at times longer than 0.1 seconds which
is a hundred millisecond or cycles. Layman’s terms
that means that the selective coordination will be
required for overload situations but not for fact to
ground fault or face-to-face faults which are
commonly called short circuit. The NFPA 99
technical committee has reduced requirements for
selective coordination for critical life safety
related loads such as elevator circuits smoke
control circuits, emergency lighting circuits, and
fire bug circuits so only the overload range over to
be selectively coordinated. Such a drastic
reduction of the NEC requirements we believe is
outside review of the 99 committee as life safety
related those mentioned above are just as critical
and likely more critical in a healthcare facility as
they would be in a stadium arena theater or high
rise office building. Even more alarming are
potential effects on patients, staff, visitors even
first responders.

Here is a couple examples. Since 1993
the NEC required overcurrent one elevator not
de-energize the whole bank of elevators. With the
proposed NFPA 99 selective coordination the system
could be designed so that the overcurrent the
elevator could result in de-energizing an entire
bank whether fed from the normal source or alternate
source. That means problems moving patients to
evacuating visitors and of course first responders
couldn't use the elevator either.

What happens if there is a passenger on
elevator when there is a short and another elevator
knocks out the whole bank. Can you see it
happening? I can. Number 2, 2005 the NEC has
required selective coordination for emergency
systems. Good examples would be loads for fire
pumps, emergency lighting and smoke control systems.
With the proposed NFPA 99 document we would lose the fire pump, the emergency lighting, and all the smoke control for a long time, when they're needed the most. These are life safety related loads that should never go down needlessly due to lack of selective coordination. The rationale to limit selective coordination by the committee at times longer than, two times longer than a hundred milliseconds are very weak at best. First of all they strike the need for arc flash protection. Flash protection for personnel work required by OSHA to wear appropriate personnel protection equipment that is available. Now in case of an arc flash having a fully coordinated system allows the smallest overcurrent device closest to the fault to open which minimizes the amount of energy, and in a nonselective system that won't happen.

Second, the 99 Technical Committee cites the need for minimum equipment damage. Here again now transfer switches are available and have 30 second rating they have zone protective interlocking and it's now a popular method to limit the time which equipment is exposed to overcurrent
while at the same time receiving selective coordination.

Third the 99 committee, reduce risk of extended outages in a nonselective system should the main open needless time will be spent identifying the --

MR. BELL: 5 seconds.

MR. ALLISON: -- the problem correcting the problem. Lastly the 99 committee the circuit problem, last 99 committee cites liability as a reason not a fully selective system.

MR. BELL: I'll you ask to stop now.

Mr. Erickson.

MR. ERICKSON: Thank you, Mr. Chair.

Once again I go back to the committee on emergency power supply systems and the fact that after that committee had met, I will read once again for you, on the issue of selective coordination, NFPA 99 has the responsibility for establishing the performance requirements for the prevention of cascading outages and NFPA 70 has the responsibility for installing installation solutions on selective coordination as defined by the performance criteria set by 99.
Therefore, I believe from a technical correlating committee standpoint we have done the job requested of us by that task group. Thank you. And by the way I would like to recognize Jason D'Antona.

MR. D'ANTONA: Thank you, Mr. Chairman.

Jason D'Antona speaking on behalf of the Technical Committee for electrical systems. I would like to first off start by saying that the Technical Committee understands selective coordination is a very important issue. The operation of the overcurrent protective devices in hospital directly affect delivery of healthcare. This is such an important issue to us. We spent six years of considerable debate. We listened to both sides of the argument with thoughtful consideration and after that we came to a consensus that short circuit -- that selective coordination was important. There hadn't been one before that for phase fault. We added a requirement, did not exist in previous additions. We also agreed in a consensus that selective coordination should not be the sole determining factor in selection of overcurrent protective devices used in hospitals. I can't
stress enough the Technical Committee voted four
times on this issue. And all of our votes were
nearly unanimous. We were in clear agreement that
selected coordination is important but it has to be,
can only be one of several factors that's
why we instituted 0.1 second requirement which has
been used successfully around the country. I think
Florida and some other places.

Our Technical Committee is comprised of
healthcare industry experience, cross-section of the
industry. We have engineers, clinician standards,
officials, facility operators, and manufacturers.
That is what makes our consensus very important
because we all agreed on this issue. So I strongly
urge the membership to support the committee's hard
work over these last 6 years. Support our approach
to this very, very divisive issue, and reject the
motion. Thank you.

MR. BELL: Microphone 5.

MR. KOVACIK: Thank you, Mr. Chairman,

John Kovacik of Underwriters Laboratories speaking
on behalf of the electrical section of NFPA and
speaking for the motion. The electrical section met
this morning and at that meeting the members voted
to support certified amending motion 99-10, and as
such the members of the electrical section support
the motion on the floor. Thank you.


MR. COSTLEY: Thank you, Mr. Chair.

John Costley, electrical engineer with Newcomb &
Boyd. I am speaking --

MR. BELL: Move a little closer to the
mike.

MR. COSTLEY: I am speaking against the
motion on the floor.

MR. BELL: Can we get your name again.

MR. COSTLEY: Jim Costley, electrical
engines. Newcomb & Boyd Consulting. I am the
healthcare section representative and a principal
member of the Technical Committee on electrical
systems for NFPA 99. Current requirements for
selective coordination of overcurrent devices in
emergency and legally required standby systems do
not specify time and criteria presently in Article
700 and 701 of the NEC. As the 2005 and subsequent
codes have been enacted over time by states and
other local agencies, selective coordination
requirements have been unclear to the public, owner,
designers, and builders. Some HAJs who have studied
the issue have successfully established performance
criteria similar to that incorporated into the new
99 document. For over 3 years the Technical
Committee on electrical systems has sought any
documentation of injuries due to miscoordinated
devices in healthcare facilities. To date we have
not received documentation of a single injury. Not
a single one. The proposed 2011 edition of the 99
standard as written establishes a fair achievable
minimum performance level of elective coordination
for healthcare facilities. This is in accordance
with the informational note number 2 in NEC Article
701 wherein NFPA 99 is referenced and I quote, for
information regarding performance and maintenance of
emergency systems in healthcare facilities.
I ask you and the membership to support
the consensus of the Technical Committee and action
taken by that committee and the recommendation of
the healthcare section and reject this motion.
Thank you.
MR. BELL: Thank you. Microphone 5.

MR. LOVORN: Ken Lovorn, Lovorn Engineering. I am speaking for the motion. I'm a registered electrical professional engineer for 12 years designing healthcare installations for 41 years and selective coordination is absolutely critical. Close is not good enough. I have been personally been involved in 2 projects which fortunately I didn't design where the hospitals were supposed to have been selectively coordinated. The coordinated studied had been done but they had not been implemented because administration didn't want to -- planned outage. I suggested to them perhaps they might be more in interested in an unplanned outage. Within a year of one of these they had a 20 horsepower motor go to ground. It cascaded up through the transfer switch to the feeder breaker to the main on the substation. The main on the substation tripped. That then started the sequence for the emergency system. The generator started, emergency buss was energized and the transfer switch closed, and it closed in on a faulted motor. That took down the emergency system. There were four
floors of this hospital with some 50 critical case
patients most of whom were on respirators that would
have died if it hadn't been for the heroic efforts
of certainly the entire hospital's nursing staff
were called to manually bag these patients for 2 1/2
hours until they got the system back on line. If
this had been coordinated and selectively
coordinated it would have taken out the motor and
nothing else. I was there the next day at the
hospital and they asked my recommendations. The
first one I said is implement the coordination
study. Get it fully selectively coordinated all the
way down through short circuit because this would
have not been picked up if it had been selectively
coordinated down to a tenth of a second. This is
way too important and the healthcare industry
intentionally hides these incidents to prevent
lawsuits, because I know of two hospitals and
neither of these ended up in any news media
 whatsoever.

So I urge you to accept this motion.

Thank you.

MR. DAGENAIS: Dave Dagenais representing myself speaking against the motion. I am a member of the electrical subcommittee from NFPA 99. I have to emphasize what Jason said. We spent hours and hours debating this. We saw representation from both sides. We thought the process through. We made a conscious decision on what was best, and I urge the membership to stand behind the committee with this. Furthermore, also in the engineering healthcare facility we do not hide things when they come up. We come up with ways to find solutions to them. We manage them. And we assure that it doesn't happen again. The reality is that the whole premise is based on risk. Today we heard a lot of could have, should have, might do, nobody has said it did. The reality is there is no history no evidence that it's an issue. So I urge the body to not make code based on could, have should have, would have been scenario. Thank you.

MR. BELL: Thank you. Microphone 1.

MR. FISKE: William Fiske, Intertek and I'm speaking in favor of the motion. Mr. D'Antona stated that the intercommittee had concluded that
the question of selective coordination timing was within the healthcare committee's jurisdiction.

That may or may not be true, but there is one thing that hasn't been brought out yet and that is what makes 0.1 second correct compared to what the NEC requires which is complete coordination of overcurrent protection devices. If there is a sound technical reason for having any kind of a delay in that, it hasn't been brought up in this forum.

MR. BELL: Thank you. Microphone 3.

MR. NASBY: James Nasby, representing myself. I'm speaking in favor of this motion. This is not an academic exercise. What we've heard here is that people have testified over and over that NFPA 99 enforces Article 700 in the National Electrical Code. Article 700 says you will have full coordination and it was voted on 6 times by Code-Making Panel 13. Since the 2005 edition has been in force. Major cities as I mentioned, Chicago and New York has required selective coordination of emergency systems for years and years prior to that. Facilities are being designed and built and are in existence today with full selected coordination and
where you don't have it you're vulnerable to taking other emergency systems off line. I have been designing and servicing fire pump equipment since 1972. Don't tell me how many years that is. I don't want to know. And these are typically 75 up to 300 horsepower motors wired with 350 MCM cable. The equipment is typically rated at 100 thousand amps short circuit and up to 200,000 amps short circuit ratings available on this equipment, and I have been involved with the fault testing at the test labs to do this. A hundred milliseconds or 6 cycles is only going to protect when somebody plugs in a hair dryer or a heater. It's not going to do anything for short circuits. Those may or may not propagate upstream and do in certain cases unless the selective coordination is all the way down to the short circuit level. That's what is important. It was discussed over and over in code-making panel 13 to retain this requirement endlessly. And some of the comments made is like why would you not do this. Or if you don't want selective coordination and localization of faults on the emergency side, which emergency source equipment is it okay to go
off line? Your elevator, your smoke evac, your lighting, your patient care, your life support, you tell me. Because without full selective coordination it is a complete unknown what happens when one of those fire pump motors in the junction box goes to a dead fault, and it does happen. I know of 6 cases and three phones calls I made yesterday. It is not an academic question that these things do occur. It's being enforced throughout the country, has been for years, and NFPA 99 is enforcing and adopting Article 700 of the National Electric Code this is in dead conflict with that. Thank you.

MR. BELL: Thank you. Microphone 2.

MR. FINEN: Thank you Mr. Chairman,

Chris Finen, Eaton Corporation, also a member of the ELS Technical Committee speaking against the motion. The question was asked where did 0.1 seconds come from that the ELS committee settled on for this requirement. And that was really substantiated because it's been a mandated standard in the state of Florida for over 15 years. During that time there has not been one single incident of loss of
life or injury due to a lack of selective coordination. Additionally the 0.1 standard and all the action of the Technical Committee do not prevent a designer from going beyond to a higher level of selective coordination. But what it does allow is consideration for the other factors that are just as important for safety and reliability such as arc flash risk to the patients or worker, electrical workers, risk of fire, risk of equipment damage, risk of extended down time. All those are still, are just as viable of considerations in electrical design as selective coordination itself. Thank you.

MR. BELL: Thank you. Microphone 5.

MR. LOVORN: Ken Lovorn, Lovorn Engineering speaking for the motion. I must object to the gentleman of few moments ago speaking against the motion saying that there had been only supposition that there had been no actual incidents. I personally saw two and it's fully documented in an article I wrote in Consulting Specifying Engineering in January of this year. So if anybody is in doubt they can go look it up. Thank you.

MR. DEMETROVICHI: Thomas Demetrovich,

Eaton Corporation and I speak in opposition to the motion. In support of the actions of the Technical Committee that basically have gone over the last 6 years two sets of proposals two sets of comments with the same and similar results that we see today. It's clear 99 addresses the performance criteria with respect to selective coordination and international code addresses the installation requirements. From a precedent perspective 99 has had some form of selective coordination requirement as far back as the 1984 edition. The National Electric Code has most recently I believe in the 2002 or 2005 edition requires selective coordination. So there is a precedent as well established with 99 on this topic. I would also add that from a coordination perspective I don't care if .1, if it's total, whatever the requirement if it's not installed and breakers or overcurrent protective devices don't meet the requirement of the code in the installation, the requirement means nothing at all. So you may have installations where the circuits breakers were not set or established per
the selective coordination study, and the events and occasions that that happened as a result of that should have no bearing on this topic that we're speaking on here today. So I speak again in support of the Technical Committee and the work and the effort that they have done over the last 6 years and with coming up from two cycles with the same exact results. Thank you.

MR. BELL: Microphone 3.

MR. CRNKO: Tim Crnko, Cooper Bussmann speaking in favor of the NITMAM. Mr. Erickson mentioned the intercommittee for emergency power systems. One of the issues that I saw several comments people asking where is the document for this, and it never came forward to see how it was done. I could understand the standards committee possibly saying correlate 99 to 517 that 99 would have a performance issues for things unique to the healthcare industry such as in 5.1.7.1.7. the ground fault protection two levels the only place in the code that it's there. And there is a selective activity statement that you have -- relays between the main and seizure. That's where I think the line
was drawn. I suspected, my opinion, possibly because we haven't even the documentation really what the agreement was, was extended beyond that to other things that probably should not have been done. Because basically you're overriding several articles of the code, several code panels. 700. 720 for elevators, fire pump 695 as well as NFPA 20 has selective coordination for full range also. So does that mean when elevator circuits power pump circuits and so forth are installed in a system of healthcare they are going to have less life safety and reliability according to the code than should be. Okay.

The other one no reported incidents. I want to find a report for NFPA 99 in the wet locations, wet procedures and dry procedures. One of the problems they found is they couldn't find data even on something as universally known as shop, an operating room but they mention as far as documenting reasons underreporting adverse event are documented. Those responsible for investigating and reporting are not privileged to all the patient safety incidents because of the nature of the
healthcare industries, physicians, nurses,

healthcare workers and hospitals treat all medical adverse events as confidential. As a result of this increased pressure to reduce risk this disciplinary is often the first recourse for a mistake. This leads to further medical mistakes as root causes are not identified through failure investigations after an adverse event has occurred. Eliminating an individual from a position seems to be normal to solve problems.

So it does get suppressed. Just the nature of the culture. I've known several situations that were life threatening that never got out. We here it from engineers and other folks, electricians, maintenance. You'll never see documentation anywhere. I had several, I would cite but I'm going to run out of time. Also mentioned that the code does not have a performance limit for selective coordination. That is absolutely incorrect. If you just look at the definition in the code for coordination selective look at the definition for overcurrent. It is very clear it's for the full range of overcurrent and that's been
stated by the code panel also code panel 13 and
there is panel statements rejection .1 seconds.
Instantaneous portion of the overtime current no
less important as well as last code cycle 2011 they
said in the statement it is for the full range of
overcurrents. So in closing I support this NITMAM.

MR. BELL: Thank you. Microphone 2.

MR. OLSON: I'm Gary Olson with Cummins
Power Generation. I asking you to vote against this
motion. Cummins Power Generation is a manufacturer
of generator sets, other types of equipment. In my
role I do a lot of work with engineers who are
trying to reach position of selective coordination
complete selective coordination in terms of some of
you, and we've seen problems that come out of it.
The result of the work that has been done so far on
this topic is that I see many instances where we
have equipment that is installed in such a way that
there is a much greater level of fault current
reaching equipment. There is no doubt in my mind
that this fault current level is much more damaging
equipment to equipment and it's much more likely to
cause actually more risk to people, just evidenced
by the arc fault indication arc fault studies that I've seen.

I would like to make a couple of points that haven't been made. One of the things that happens all the time is that this topic seems to be characterized as an all or nothing situation. Either we have selective coordination or we don't have selective coordination. In fact when a consulting engineer is designing a facility they do everything they can to get selective coordination because they know it's the thing to do. There are many situations where it's very difficult to achieve, and extremely expensive measures are gone to in order to try to achieve it to some level. The net result of it there is sometimes where in their opinion as the person who knows most about the installation and most about how to make it safe and reliable is not able to actually do that because of pretty much arbitrary rules as to what selective coordination means. So let's not think of this as all or nothing. Let's think of this as giving the consulting engineer that is most capable of doing this job the ability of doing his job and being
responsible for it. That's all I have for now.

Thank you.

MR. BELL: Thank you. Microphone 5.

MR. MARSHALL: My name is Bob Marshall

with Herzig Engineering in Kansas City speaking on behalf of Bob Herzig speaking for the proposal.

Mr. Herzig the owner of our consulting firm and professional engineer submitted a comment that NFPA 99 has less restrictive requirements than the NEC puts us into a potentially litigious dilemma.

First if we design the NFPA 99 we'll be open to greater liability risk because NEC and NFPA 20 have more stringent requirement. NEC is often adopted by state and local law where NFPA 99 is seldom adopted into law. If we adhere to the NEC and NFPA 20 requirement it may take us longer to design the job costing us more to design the project. The NFPA 99 committee did not have a good answer for this dilemma we have. Their panel statement of engineer of record is responsible for the design regardless of the requirement of code and I just heard that statement a few speakers ago. Can be translated Mr. Engineer that is your problem. The code made
their ruling. The NFPA 99 Technical Committee goes on to say in addition proposal law 107 gives the engineer an achievable benchmark for design. Proposal 107 inserted a tenth of a second selective coordination requirement in the NFPA 99. This can be translated, we gutted the requirement for selective coordination. It's now a no brainer to meet the requirement. No need to worry about ground faults, or face-to-face fault that trip circuit breakers and instantaneous trips or open fuses in their current limiting range. It's so easy there is no need to spend engineering dollars doing a coordination study anymore. You can almost install any breaker and fuse and comply without an analysis. So don't worry about the life safety load. The NFPA 99 standard will cover your back trust us. I don't feel comfortable with that, dealing from the 99. So in summary we believe it's unethical for an engineer to hide behind a standard that professes -- all responsibility for designing a system that is knowingly unsafe. We cannot allow engineers to design a system we know is potentially apt to shut down needlessly endangering human life.
because it's easier and less costly to do so. So I urge you to vote with me and approve this motion.

Thank you.

MR. BELL: Thank you. Mr. Erickson do you have a comment.

MR. ERICKSON: I apologize to this assembly. I didn't give you the reference from the Standards Council. It was issued on September 19th of 2007. It went out to interested parties so maybe the ones of you didn't get it weren't interested.

But it is Standards Decision D as in dog number 07-6 on Standards Council agenda item SC Number 07-7-5-1. Thank you.


MR. MANCHE: Alan Manche Schneider Electric Square D speaking in opposition to the motion. I simply want to call attention to the fact that I keep hearing people talking about fire pumps, elevators emergency systems, that's not what this is about. If you read the information we're talking about central electric system within a healthcare facility. It's not as broad as it's made out to be here, and I think the Technical Committee has done
the job, delivered a performance requirement through NFPA 99 for those specific circuits and I urge you to oppose this motion.

MR. BELL: Thank you. Microphone 1.

MR. HICKMAN: Thank you. Palmer Hickman representing myself. I am a member of the NEC Technical Correlating Committee. Yes there is another Technical Correlating Committee involved in this. And we had a conference call about a week and a half two weeks ago, Bill did we not, and we were so concerned about this we accepted a motion to send the entire document back because we still don't think it's right yet. The following day, I think we received email that said, we weren't allowed to have an opinion. So I am certainly not speaking for the Technical Correlating Committee. I'm speaking for myself.

I'm speaking in support this motion. I have several points I would like to make. My own personal opinion of why this motion should be accepted. The first is as you heard many times this has been debated many, many times in the NEC process. Four code panels debated this. Code panel
12 both the one that existed prior and then
As an example the most recent decision by Code-Panel
was on proposal 1395 where it was proposed
selective coordination for faults with the duration
of a tenth of a second or longer. This is why NFPA
accepted. This proposal was rejected by a
vote of 11 to 3. So we clearly do not have
consensus in the industry to support 1 tenth of a
second. Panel 13 rejected that .1 with the
following statement. The .1 second limit in this
proposal could reduce the level of safety by
eliminating the type of currents that would need to
be isolated to the nearest upstream device requiring
selective coordination down to only 1 tenth of the
second will cover overloads and a few minor phases
and minor ground faults. So that was the 11 to 3
vote in the proposal stage.
In the comment stage, comment 13.136
requested acceptance of that proposal I just
discussed and again the committee this time had even
less votes supporting the 1 tenth. It was a 16, 2
vote with the following committee's statement. The
comment and associated proposal reduces the level of safety and is not needed because collective coordination for the full range of overcurrent is achievable. That is an important point. It is achievable. Why are we going to a lower level of protection and in one of the most important places you'll ever be. Selective coordination for faults with duration of 1 tenth of a second or longer installation where overcurrent protective devices would be coordinated to primarily overload and a few level phase-to-phase in ground faults. Arc flashes are not necessarily greater for selectively coordinated systems.

So I believe that this makes it clear that the NEC code-making panels have addressed what the 99 Technical Committee has done. Accordingly there is a direct conflict with the NEC. We have a series correlation issue.

Another point, I asked some colleagues to give me any kind of information that they might have had as far as what NFPA might think of this and I was forwarded a correspondence dated May 11, 2011 from NFPA advisory services. In it it says the NEC
is clear that where selective coordination is
required an overcurrent condition is to be localized
to the effected circuit or equipment. Overcurrent
is defined in Article 100 is any current in excess
of the rated current of the equipment or capacity of
the conductor and may result from an overload short
circuit or ground fault. In my opinion this
correspondence indicates selective coordination is
required for any, as stated in that correspondence,
any current, any current includes overload short
circuits and ground faults. This puts the NFPA
reduction and protection in conflict with the
requirements and definition in the National Electric
Code.

My third point is that the NFPA 99
Committee -- enforcement issues which one of these
codes is an enforcer going to enforce. What if the
jurisdiction adopts NEC as routinely does but does
not directly --

MR. BELL: 30 seconds.

MR. HICKMAN: Fourth point the NFPA 99
Committee action poses a threat for the entire NFPA
process. Are two separate ANSI documents allowed to
cover the same requirements? The answer is no. Are they allowed to conflict with one another? Of course not. What about conflicts with the selective coordination requirements of NFPA 20 the fire pump standard, now as I understand we have conflict between two standards and NFPA 29 and NFPA 20.

MR. BELL: Stop. Your time is up.

Microphone number 2.

MR. WEBB: Bill Web with Webb Fire Protection representing ASHRAE and I call the question.

THE FLOOR: Second.

MR. BELL: Motion on the floor to close debate. I hear a second.

THE FLOOR: Second. All those if favor of closing debate please raise your hand. Thank you. All those opposed. Motion passes. We'll move directly to vote the motion on the floor which is to accept comment 99-13. All those in favor of this motion please raise your hand. Thank you. All those opposed. I am going to call for an electronic vote on this one. I will now call for a vote using the electronic voting devices given to the voting
members. You must have a red badge with the word member on the top to be voting. I just remind you to either vote 1 in favor of the motion, or 2 opposed to the motion, or 3 to abstain.

A. Please vote now. Five seconds. Voting now closed. 87 to 119. Motion fails.

THE FLOOR: Mr. Chairman, request a standing count on this.

MR. BELL: We're no longer doing standing counts. Electronic means is the means of determining whether or not the motion passes or fails.

We are going to move on to motion sequence Number 99-15. This is a group of many motions so I'll entertain a motion any one of the three motions is referenced in this sequence.

Microphone No. 5.

MR. LOVORN: Ken Lovorn, Lovorn Engineering presenting a motion to accept my comments on 4.4.2.1.2 and set --

MR. BELL: So the motion on the flour to accept comment 99-122 and voting on all three of these up or down. Is there a second.
THE FLOOR: Second.

MR. BELL: I hear a second. Please proceed.

MR. LOVORN: As I mentioned before I have seen these selective coordination issues in the past, and certain electrical systems it's selective coordinated or it's not. There is no partial selected coordinated system. Choosing an arbitrary point this 0.1 second is purely arbitrary. Might as well choose 1 second or 5 seconds or 10 seconds or a hundredth of a second. In reality, the reason that the .1 second was chosen is because that's where the instantaneous region of circuit breakers falls. So that they do not coordinate below that .1 second. And for circuit breakers that's a little more difficult. The committee statement says management of this type of performance traditionally belongs under the purview of this committee. And since that is the case, the committee should recognize that having a system selectively coordinated below point 1 second does not change arc flash risk or equipment damage. We agree that the reduced risk of extended outages is very important to healthcare facilities.
having an electrical system selectively coordinated.

One of the best ways to reduce the extended outage risks. The committee statement in response to my request to change was mandating selective coordination below .1 second as the sole determining factor in overcurrent protective device result in diminished reliability of essential electrical systems. This is just simply not true. In the National Electric Code Article 100 it says, and I quote, localization of an overcurrent condition to restrict outages to circuit or equipment affected will increase the reliability. The main goal of selective coordination is to isolate the faulty portion of the electrical circuit quickly while maintaining power in the remainder of the electrical system. The fault or overload circuit is isolated by the selective operation of overload protective device closest to the condition. And that is a quote directly out of the National Electric Code, which is in direct opposition to the Technical Committee Position. So after giving you the one example which I could give you the name except that I am not permitted to because they want to keep it
under wraps, I'm strongly recommending that that .1
second phrase be deleted. Thank you.

MR. BELL: Thank you. Mr. Erickson.

MR. ERICKSON: Once again recognizing
Jason D'Antona.

MR. D'ANTONA: Partners Healthcare, I
would like to call the question.

MR. BELL: The motion is on the floor
to close debate. All those --

THE FLOOR: Out of order we have to
have debate before you can close debate.

MR. BELL: This is a nondebatable
motion.

THE FLOOR: Point of order.

MR. BELL: I would ask you to vote in
that manner. So the motion, is there a second to
close debate?

THE FLOOR: Second.

MR. BELL: There is a second. The
motion on the floor is to close the debate. All
those in favor please raise your hand. Thank you.

All those opposed. Motion fails. Is this anybody
-- I see no one at the microphone. Microphone No.
MR. CRNKO: Tim Crnko, Cooper Bussmann.

I want to correct something that was said previously by Alan Manche. I differ with him on the essential electrical systems in hospital. The life safety branch is going to have life safety branch, elimination of means of egress, exit signs, hospital communications, systems where use for issuing instructions of emergency conditions so it's certainly -- elevators are often used for first responders put on the emergency systems at least 700 I assume they are going to go on the essential systems. Fire pumps when they're put on the feeders multi-building campuses a lot of hospital are, they'll put them on the same systems. So it is pertinent that they're basically gutting the requirements in the code for those articles made by those committees.

MR. BELL: Thank you. Microphone 1.

MR. FISKE: Thank you, Mr. Chairman.

William Fiske, Intertek speaking in favor of the motion. I think that the results of the last discussion have made it clear that the 99 Committee
has this 0.1 second coordination down absolutely right. So I'm confident that you guys will send us
a proposal to change the National Electrical Code and you'll have plenty of substantiation so that
we'll be able to join the modern world along with you.

MR. BELL: Microphone 6.

MR. COSTLEY: Jim Costley electrical engineer. I'm speaking against the motion on the floor. This is the same motion as we've just gone to a lengthy discussion about and through the hard work and the 6 years of debate and the technical committee developed a consensus and action which was published as a part of the proposed 99 document. I ask you to support this consensus and the recommendation of the healthcare section. Reject this motion. Thank you.

MR. BELL: Thank you. Microphone No. 3.

MR. NASBY: James Stanley representing myself. I am speaking in favor of this motion. One thing I want to point out is with regard to the legal aspects there are many people, engineers
included, who think that if you change a standard to lose requirements you can hide that standard from a product liability standpoint. I supervised several dozen chronic liability defense cases and I can tell you this is the kind of thing that trial lawyers drool for because once it's evident that there is a state of the art which is very clear that is being enforced today and has been enforced for years even prior to 2005 in the code and other people do not comply with the state of the art, you are liable. The only thing I want to point out here again we hear that NFPA 99 does enforce Article 700. No it doesn't, yes it does, no it doesn't. Let's make up our mind. Thank you.

MR. BELL: Microphone 6.

MR. DAGENAIS: Dave Dagenais speaking on behalf of myself as a member of the Electrical Committee of 99. I want to continue to emphasise that this is not something that was taken lightly. We've discussed it at great length. We've had testimony from both sides. All of the evidence was weighed. Decision was made going this way, it's the best way to go. We talked about all these things on
the last motion. There is nothing different about
this motion. It's the way to go. Thank you.

MR. BELL: Microphone 5.

MR. LIPSTER: Steve Lipster with the
electrical workers and I rise for the motion. This
is a great responsibility we have to provide
performance guidance for healthcare facilities and
unfortunately once against once more we're providing
less restrictive environment than we have
previously. And I don't get it I really don't. We
can say that they're too difficult to design. Well
according to the American Hospital Association there
has been over 25,000 healthcare facilities, 25,000
healthcare facilities designed and built since 2005,
all with selective, fully selective coordinated
systems. So I don't think it's too hard. I just
have to tell you incredibly disappointed that again
we're choosing less restrictive language creating a
huge conflict with the sister code. Thank you.

MR. BELL: Thank you. Microphone 1.

MR. ALLISON: Malcolm Allison, National
Fuse Association. I wanted to say something
positive before you fellows blow this one down, I
wanted to call it to the attention of the Technical Committee do you have a short circuit and you have full range selective coordination you get 4 things. You get better arc flash protection, less electric energy, you get less equipment damage, you get reduced outages, and you get higher liability.

That's all I have to say.

MR. BELL: Thank you. Microphone 2.

MR. D'ANTONA: Jason D'Antona, Partners Healthcare speaking against the motion. I just want to address something said earlier. 0.1 second requirement was not arbitrarily chosen. It was chosen based on established code that has been successful code in the state of Florida for 15 years as Chris mentioned. I also want to stress the fact that our committee is comprised of a cross-section of the industry. Several professional engineers, professional electrical engineers, myself as one, were gravely aware of the importance of this issue. This issue is not taken lightly by our committee. We deliberated it over 6 years. We had four votes to overwhelmingly in the majority for this position.
were not overwhelming majority. Thank you.

MR. BELL: Microphone 3.

MR. CRNKO: Tim Crnko, Cooper Bussmann.

The last statement, I looked in Panel 13 it was more overwhelming in 2011 than 2008 for selective coordination. If you look at the language in the comment section adopted by this panel in 99, it says fault with duration greater than .1 seconds. That means you do not have selectively coordinate for overloads. I think it was a mistake. I think it's a law requirement. Means anything less than .1 second you don't have to worry about. -- insulated breakers they're ignored. Most faults that's where they're going to lie. Thank you.

MR. BELL: Microphone 5.

MR. SAPRETUS: Vince Sapretus, Cooper Bussmann. Why is it that our banking centers financial centers design and install for selective coordination? Do we worry more about our money than we care about our people? We need to think, vote your conscience on this thing. We are going to take better care of our money than we are the patients. Put the firemen out there. You need to get up to
fight the fire. If you're in a building like this,
you know that it's been designed and installed such
that a fault in one elevator is not going to take
them all out. You go in to fight a fire in a
hospital you don't have that assurance. You won't.
You won't have that insurance.

Follow the money. What are we talking
about here? We're talking about saving some bucks.
We're talking about saving some space. That's what
it is all about. Follow the money. We're wanting
to gut the requirements that 4 code panels of the
National Electrical Code have talked about for three
cycles and the votes keep getting more lopsided and
more lopsided. And we're going to take the
healthcare standard and go and complete and opposite
direction to what has been in the National Electric
Code now for in some cases since 1993 and in many
cases since 2005. We're going to gut those
requirements going to save some bucks and we're
going to put patients, staff, first responders and
firemen at risk. I urge you to vote for this
NITMAM.

MR. BELL: Microphone 4.
MR. LEFFERT:  Kevin Leffert, Eaton Corporation and I'm speaking against the motion.  
I'd just like to recap because we've been at this for a while.  First off it was clarified under the Council decision that this group does have responsibility for the performance requirement.  
Secondly, I think it was also stated that they have been at this now for through four different technical committees.  It's going on over 6 years all the technical discussions have had full airing.  
Also that technical committee overwhelmingly made the technical decision.  I urge you to support the NFPA 99 Committee because that's what we're here for now voting on right now.  We are not talking about the National Electrical Code requirement, and let's support the 99 committee in their process.  Thank you.

MR. BELL:  Thank you.  Microphone 2.

MR. HORSHNER:  Larry Horshner, I work for BF Consulting Engineers.  I'm as a member of Code Panel 13 and the Massachusetts Electrical Code Advisory Committee.  I just want to put something into perspective.  In 2008 the code book came out
700.7 had this fairly harmless looking sentence in there and I think it took people probably 6 months, 6 to 8 months as the code was out before people started looking at it, what does this mean, what do we have to do here. And I'll agree prior to that time we didn't do a very good job in selective coordination, but since then we have got people from Eaton here, from Square D, and since then they have done a tremendous amount of work and it's a big part of their industry, a big part of our industry, and we're not sitting back and we're not trying to not do it, and we have a conscience. When I hear these statements about what if your daughter was lying on a hospital bed. If my daughter was laying on a hospital bed she would be just fine.

What has become what I've seen evolve, and I review power system studies every day, and what has evolved is the industry has taken up the slack. They've created systems, they've created equipment, and breakers, that will coordinate. But when you get down there to that .01 sometimes it's just tough. And most of the time if you say .1 most of the time they're at .04, .02. You need this
little built of leeway. You need this little bit of
leverage. Everybody is doing it, getting better at
it. Equipment every day is getting better at it,
but this is a very reasonable rule.

Now I was in AHJ for a long time in a
town just a few miles west of here. And as a young
inspector back in the early 80s I completely bought
into the philosophy that we all enforce the code.
We don’t cherry-pick the rules we enforce. If I
enforce all the rules and the inspector in my next
town he ignores everything it makes my job tougher.
But more so it adds to the credibility of the code.
If you cherry-pick rules then the code loses its
credibility and loses its integrity. The best way
to get rid of a bad code rule is to enforce it.
Because sooner or later there could be a ground
swell and people will change it. And when I see
happening with this is a lot of the inspectors, I
belong to inspector associations, go to meetings, a
lot of inspectors they are just pushing it off and
that's a scary part. What it does to the code when
we create rules unenforceable and people are
enforcing then, don't understand them. What it does
1 to the credibility of the code is what concerns me.
2 This .1 is a good rule.
3 MR. BELL: Thank you. Microphone 5.
4 MR. OAKLEY: George Oakley speaking on behalf of myself. First and foremost when one talks about selective coordination, there are in fact --
5 MR. BELL: For or against the motion.
6 MR. OAKLEY: Sorry. For the motion.
7 Thank you. Selective coordination by definition is false selective coordination. You can go through the NEC and it deals with full coordination. If you look at generally accepted engineering practices and you use other documents that help you from a design standpoint such as the IEEE book, this talks about selective coordination. It is full of coordination.
8 Now, the approach that the healthcare industry has chosen to take in identifying one tenth of a second has modified and to a degree bastardized the definition of selective coordination to the extent that it is only covered, at least at the proposal for the healthcare industry, in the overload range.
9 Now, several speakers ago on one of the other motions told you about the industry situation
of high fault currents and the damage of equipment.

He is absolutely positively right. So why in heaven's name would you not want to coordinate fully selectively down in the short circuit range as well as the overload range? The previous speaker was talking about enforcement. In a past life I hold a license as a state electrical inspector for Ohio and this is enforceable. It's good code. It's good safety practice but when you start to manipulate and massage these definitions it's kind of akin to somebody saying, oh, there is a piece of debris in the party refreshment containers when in fact what you have is the turd in the punch bowl.

MR. BELL: Thank you. Microphone 2.

MR. D'ANTONA: I would like to call the question.

MR. BELL: Motion on the floor to close debate.

THE FLOOR: Second.

MR. BELL: I hear a second. All in favor please raise your hand. Thank you. All those opposed. Motion passes.

So we are going to move to the motion
on the floor which is a group of mini motions and we're voting on all three of these motions in this sequence which is 99-122, 99-127 and 99-128. All those in favor of the motion please raise your hand. Thank you. All those opposed. Motion fails.

Move on to motion sequence Number 99-16. Looking for a motion. Microphone 3.

MR. BEEBE: Chad Beebe, associate director of American Society of Healthcare Engineers and I move to accept comment 99-159 found on pages 99-37 of your ROC.

MR. BELL: Motion on the floor to accept 99-159. Is there a second? There is a second. Please proceed. Mr. Chairman.

MR. ERICKSON: Since this set of motions are submitted by the American Society for Healthcare Engineering, therefore I hope to avoid conflict of interest. At this time I'm going to step down and ask Mr. Koffel to address the issues on behalf of the Technical Committee.

MR. BELL: Thank you. Proceed, Mr. Beebe.

MR. BEEBE: Well hopefully we won't
have to talk about selective coordinated anything in this one and you won't have to talk about location anymore. This one is hopefully fairly simple. The committee rejected this comment I think under somewhat false pretenses and misunderstanding. Their statements said option nonmandatory and not used anywhere in the Chapter 5 regarding gas, they agreed that the system was actually optional, but actually if you look at several sections within Chapter 5 you'll see that in line valves are optional and actually says that there. Also includes the term option in the appendix note on that, and in many other places in 99 also says. There is quite a few places throughout the document as well as in other documents such as NFPA 70. Where it says in Article 51719, see patient grounding and bonding is optional, E additional protective techniques in critical care areas, parens, optional. Article 702 optional standby systems. It's very confusing when you use the term optional for optional systems and then you have an optional system that you don't use the term. It's been creating a lot of confusion across the country
getting a lot of requests through Ashton's lister
and Ashton's questions you know wondering why their
authority jurisdiction, enforcing them to install
instrument air systems when it should be optional
there is other way to do this. I think the
committee agrees it's optional just adding one
simple word. I urge you to support this motion.

MR. BELL: Thank you. Mr. Koffel.

MR. KOFFEL: Whereas the Technical
Correlating Committee took no action on this
particular comment I will defer to Mark Alan a
member of the committee on piping systems to present
the committee position.

MR. ALAN: Mark Alan, today I'm
speaking on behalf of the committee and Dave
Molehill chairman. I would like to simply say that
instrument air enters the document as an alternative
to nitrogen but if you look in the document neither
instrument air nor nitrogen are in any way
mandatory. In fact, nothing in NFPA 99 in terms of
high system is mandatory from NFPA 99. 99 deals
with how to install those systems once the election
to put them into the hospital has been made for
other reasons from other standards, etcetera. So to
give you an example, we give you five different
methods to install oxygen systems but you don't have
to have all five of them in your building. The
inherent design of the document is meant to allow
you to make choices based on whether you wish to
install that system who do not wish to install that
system for other reasons made by the authority
having jurisdiction or the owner.

So I would ask you please to reject
this on three grounds. First we believe that such
addition is unnecessary by virtue of the design of
the document, the fundamental scope of the document.
Secondly, we think that if you made such a statement
on one system you now would confuse the AHJ's even
more because now it would sound like all the other
systems are mandatory this is the only one which is
optional which is clearly not the intent of the
standard. And third that if it was the pleasure of
the members to make this change this is not the way
to do it. The design of the document should allow
us to make this more clear across the document not
on this one single system. Thank you Mr. Chairman.
MR. BELL: Thank you. Microphone 1.

MR. SHALINSKI: Mark Shalinski with consulting engineers I would like to speak for the motion. I would like to first of all, what Chad was saying about the need for being an optional system.

In the current definition of instrument air, it's something that is for the purposes of this code instrument air intended for powering of medical devices unrelated to human respiration surgical tools sealing arms. Many times interpreted to say that the sealing arms need to have instrument air or that other medical devices, going to have medical devices by gas powered system is going to have to be instrument air. Instrument air requires the redundant systems, the zone belt box, etcetera. And in addition instrument air is actually cleaner than medical air. Instrument air has much higher filtration requirements. So the interesting thing is that while medical air is not allowed to serve booms and such, the instrument air which is now allowed to be breathed and much cleaner is what is required to be used for booms and medical devices.

By inserting the word optional the more clear that
the full use of an instrument air system itself is optional. I encourage a vote for the motion.

MR. BELL: Thank you. Microphone 3.

MR. DAGENAIS: Dave Dagenais speaking on behalf of the healthcare section in favor of this motion. This morning at the healthcare section executive board meeting the board and the membership voted to support this motion. The healthcare section believes that this will clarify an issue that has been confusing over the last several years. We also agree that there could be some confusion with the other ones that do not indicate optional however there is not an option to address this at that point. Getting one of these in as optional will clearly be better than getting none of them in. We urge you to support it. Thank you.


VOICE: Speaking for myself 35 years in a major hospital instrument air is not meant to be breathed.

MR. BELL: Speaking for or against?

VOICE: Against. It's not meant to be breathed. If you go to the definition under support
Leavitt Reporting, Inc.

1 gas it mentions nitrogen and mentions instrument air
2 and says neither are allowed to be respired by
3 patients. So that information is wrong. I'm just
4 totally against this.
5
6 MR. BELL: Any further discussion?
7
8 Seeing no one at the microphone we'll move to vote
9 which is to accept comment 99-159. All those in
10 favor please raise your hand. Thank you. All those
11 opposed. Motion passes.
12
13 We move on to sequence number 99-17.
14
15 Is there a motion on the floor related to sequence
17
18 MR. PETERKIN: James Peterkin, Heery
19 International representing the healthcare section.
20
21 When I signed in for this I noted that I would not
22 be bringing it to the floor.
23
24 MR. BELL: So you're indicating you're
25 not pursuing this.
26
27 MR. PETERKIN: Correct.
28
29 MR. BELL: We'll move on to sequence
30 number 99-18.
31
32 MR. JELINSKE: Mark Jelinski with Cator
33 Ruma Associates representing myself. I like to
propose that we accept comment number 99-236.

MR. BELL: The motion is to accept comment 99-236. Is there a second? I hear a second. Please proceed.

MR. JELINSKE: This proposal will reject proposal 99-382 which establishes Chapter 8 plumbing. This proposal goes way beyond the scope of NFPA 99 which is the scope of this code is to establish criteria to minimize the hazard of fire, explosion, and electricity in the healthcare facilities providing services to human beings.

Again this is establishing a chapter on plumbing. This proposal, these systems are used in healthcare facilities with very little guidance until now. Healthcare facilities' plumbing systems are subject to multiple strict requirements at state local code and state and local public health code. In addition the FGI/use AIA guidelines for design and construction healthcare facilities is considered the industry standard for healthcare specific design and is adopted as code in many jurisdictions. At best this is kind of a waste of ink actually. Portable water systems shall comply with applicable plumbing
code. What happened to very little guidance.

Plumbing fixtures shall be suitable for the intended use. Okay. Further, it’s not real complete, incomplete. There are multiple terms in this proposal not defined by the code such as non potable water, black grey clear wastewater, professional use systems and how the guy with the clipboard and deficiency list really understands how to deal with things like that, provisions to allow potable water systems to continue to operate shall be provided.

Another level of regulation to the healthcare facility potential conflict and confuse the implementation of the model code and guidelines developed over decades by plumbing industry experts. This is NFPA’s first into plumbing. It shouldn't be incorporated into a document that will automatically be adopted nationwide in just about every healthcare facility in the U.S. If the National Fire Protection Association feels plumbing regulation is somehow within its purview, then isolate it to a topic and do a separate code, allow that to be developed fully and allow those who have jurisdiction to consciously adopt a plumbing code.
developed by the NFPA. NFPA's concern of fire protection is already well addressed by categories such as materials standards and the protection of fire construction. I urge in the interest of avoiding further confusion and further conflicting regulation on the healthcare industry that this motion be passed.

MR. BELL: Thank you, Mr. Koffel.

MR. KOFFEL: Mr. Chairman, as you can see there are a number of certified amending motions that have been submitted on Chapter 8 of this document. Based upon the number of cams that have been submitted, the committee on mechanical systems had a conference call last week and reviewed those amending motions. The input that I've received from the committee is that some members believe that they acted at the direction of the Technical Correlating Committee. There are other members that believe based upon the certified amending motions that we have established a standard higher than what was intend by the TCC and the stated purpose of this document which is to provide a minimum set of requirements for the performance testing and safe
practices for facilities equipment and appliances
including other hazards associated with the primary
hazard. As such while I cannot represent this as an
official position of either the committee on the
mechanic systems or the Technical Correlating
Committee. It is from the people who have
participated in those calls meetings this week it is
our belief that the best action would be to support
this motion and return the committee and allow the
preparation of attentive interim amendment to be
processed and the schedule will allow this to be
processed at the August Council meeting to retain
any necessary provisions intact would be lost by
returning the entire chapter.

MR. BELL: Thank you. Microphone 3.

MR. JOYUS: Bill Joyus I'm part of the
mechanical systems committee and I just wanted to I
guess knowledge the fact that our committee has met
this week informally and also discussed the
potential issues with interpretation by the AHJ and
the issue that might cause so I'm just here to
advocate the fact that we are in agreement with the
fact that we want to support this motion.
MR. BELL: Thank you. Microphone 3
again.

MR. BEEBE: Chad Beebe with the
American Society for Healthcare Engineering. We
also were in on the conference calls and as maker of
a number of these motions on Chapter 8, I also
concur the route that the Technical Committee is
going and the proposed text TIA that they drafted up
is well worth supporting this motion.

MR. BELL: Thank you. Microphone 5.

MR. BOLTON: John Bolton CTA Architects
Engineers, Great Falls, Montana. I am in support of
the motion and representing the Montana Society of
Healthcare Engineers and also many architects within
the Rocky Mountain region. Our main concern is that
this does not get to be a motion that does
redundancy in healthcare systems. As it was
mentioned earlier, the healthcare systems typically
follow the many plumbing codes and standards of
local jurisdictions and we don't want to see this
incorporate this and make it that much more. They
have been getting along with this, done very well,
and development of the plumbing codes should be left
to the folks that specialize in those systems. And
I don't feel that NFPA taking this attempt should be
trying to specialize in the plumbing code sections
to do redundant systems within facilities. Thank
you.

MR. BELL: Microphone 3.

MR. DAGENAIS: Speaking on behalf of
the healthcare section, this morning at the
healthcare executive board meeting the membership
and board voted to support this motion. Healthcare
section is in favor of this motion.

MR. BELL: Thank you. Seeing no one
else at the microphone, we'll move to the vote which
is to accept comment 99-236. All those in favor of
the motion, please raise your hand. Thank you. All
those opposed. Motion carries.

Now it's my understanding that because
the entire Chapter 8 was returned so there is no
longer any text, that the makers of the motion for
sequence numbers 99-19 through 99-27 have decided
not to pursue those motions. If my understanding is
correct please come to the microphone right now. My
understanding is that those motions will not be
pursued.

MR. BEEBE: Correct.

MR. BELL: Microphone 3.

MR. BEEBE: That is correct.

MR. BELL: State your name.

MR. BEEBE: Chad Beebe American Society for Healthcare Engineering.

MR. GREGORY: That is correct, James Gregory, Health Facility Consulting.

MR. BELL: Thank you. We'll move on then to motion sequence number 99-29.


MR. BELL: Sorry. Sorry about that.

28. I'm trying to go too quickly here. You would understand the reason why. 99-28 motion on the floor?

MR. JELINSKE: Mark Jelinske, with Cator Ruma Associates consulting engineers, representing myself. And I'd like to propose that we accept comment 99-258.

MR. BELL: Motion to accept comment 99-258. Is there a second? I hear a second.

MR. JELINSKE: This will reject
proposal 99-389 establishing Chapter 9 D. This proposal goes way beyond the scope of NFPA 99 which is the scope of this code is to establish criteria to minimize the hazards of fire explosion and electricity in healthcare facilities providing services to human beings. This attempt this proposal attempts to regulate comfort in the clinical performance and has no business being in NFPA 99. In the report on proposals, other proposals were rejected with statements like there are numerous technical changes embedded within this document not substantiated by the submitter. And that was for modifications to existing topics. This is an entirely new topic. Same logic should apply. The industry has already many good consensus documents and codes and to guide designers and healthcare facilities such as state, local, municipal, building, fire code, state and local public health code, multiple NFPA documents already address the life safety aspect of AHC which is in the purview of NFPA including the special requirements for healthcare. The FTI AIA guidelines for healthcare facilities and standard 170 are
considered the industry standard of care and now are adopted especially since FTI has incorporated ASHRAE standard 170. Adopted as code. Throughout many areas for facility design construction. And an excellent move the healthcare design construction industry has now strong coordinated voice through FGI and ASHRAE. So Chapter 9 confuses, one of the issues here is that we fortunately missed all the debate on redundant plumbing systems, but the concepts of Category 1 through 4 which is established in Chapter 4 talks about specific systems which are critical to health and life safety. However Chapter 4 or Chapter 9 HBC confuses this and uses the term spaces. So for example even though the lack of humidity, in Chapter 4 looking at humidity, you say look, humidity it's not going to kill anybody not a Category 1 system. However Chapter 9 says that humidifiers serving Category 1 space requires redundancy. So now even though -- won't kill anybody it's got to be a redundant humidifier system. It will require 96 hours of fuel for HVC again category 1 space nothing related to whether the lack of a particular HVAC subsystem in
that space will kill somebody. And then for the
rest of the document the rest of the essential power
supply system 96-hour fuel supply system, so we have
some conflict how do we size the systems there,
otherwise requires 96 hours of fuel. One of the
bigger issue is this system requires full coverage
smoke detection system and either in NFPA 92
engineer smoke control system for Category 1 phase
and then it has an idea to use the return system in
a hundred percent exhaust mode for Category 2 space
in the event of fire. Well the model code prohibits
the operation of HVAC system during a fire unless
part of a fairly prescriptive engineer's smoke
control system. The only area that is listed not
being category 1 or 2 in the annexed note is the
ambulance garage. Again, this is NFPA's first
parade into comfort systems. It should not be
incorporated in a document that will be
automatically adopted nationwide.

MR. BELL: 30 seconds.

MR. JELINSKI: NFPA legitimate area of
concern fire protection again is already well
addressed by category materials standard protection
of the opening operation with fire alarm systems,
etcetera. Thank you.

MR. BELL: Thank you. Mr. Koffel.

MR. KOFFEL: Thank you, Mr. Chair.

Although dealing with ventilation systems as
compared to plumbing this is essentially the same
issue we dealt with in comment 99-236. Therefore, I
am not going to repeat all of my comments and I
would refer the reader to the transcript to my
comments in comments 99-236. However in summary, I
would state that again, the committee members
present on the conference call the committee members
that have participated in meetings this week feel
that there are some essential provisions that would
be lost by returning this chapter but having said
that, we would encourage you to support the motion
and the committee will attempt to process a TIA at
the Council meeting in August.

MR. BELL: Thank you. Microphone 3.

VOICE: I just want to reiterate the
committee position which was that we have discussed
this and essentially the same comment I had for the
previous measure also.
MR. BELL: Microphone 3.

MR. DAGENAIS: Dave Dagenais representing the healthcare section. The healthcare section's executive board meeting this morning voted to support this motion.

MR. BELL: Microphone 5.

MR. BOLTON: John Bolton CTA Engineers Great Falls Montana representing the Montana Society of Healthcare Engineers. We also support this proposal to have Chapter 9 removed in its entirety from the documents. Thank you.

MR. BELL: Thank you. Seeing no one else at the microphone we move to the vote to accept comment 99-258. All those in favor of this motion please raise your hand. Thank you. All those opposed. Motion carries.

Similar to Chapter 8, the following motions sequence numbers 99-29 through 99-39 it is my understanding that these will not be pursued because the new chapter has been deleted. So we're going to move on to sequence number 99-40. And I just want to reiterate a comment Ron Barr made this morning regarding the
1 section paragraph that this is applicable to and
2 actually in Chapter 11 under gas equipment and the
3 paragraph number is 11.4.3.3 paren 2. Is there a
4 motion on the floor. Microphone 5.
5 MR. EHRENWERTH: Jan Ehrenwerth,
6 American Society of Anesthesiologists. I move to
7 accept comment 99-297.
8 MR. BELL: The motion is to accept
9 comment 99-297. Is there a second? I hear a
10 second. Please proceed.
11 MR. EHRENWERTH: Ladies and gentlemen,
12 the hour is late and I'll try to make this brief.
13 Basically what my comment does is it rejects an
14 action by the medical equipment committee to allow a
15 manufacturer of an ozone sterilizer to plug in his
16 sterilizer to the patient's oxygen system. That's
17 the patient's oxygen system. We who work with
18 oxygen everyday consider the patient oxygen system
19 sacrosanct. There is nothing that can be permitted
20 to be plug into this oxygen system. We have
21 hundreds of patients at any given time whose life
22 depends on the oxygen system. Even though there is
23 an attempt by the committee to make this safer or
make it fail-safe if you will, nothing is fool
proof. As we all know nothing is idiot proof. We
can defeat anything. We simply, there is just
simply no justification for allowing a connection to
the patient's oxygen system for an ozone sterilizer.
The machine can be run off tanks, the main argument
I heard is we have to move tanks around a hospital.
We move hundreds of tanks around the hospital every
day. It's a nonissue.

We have to safeguard back flow
protection devices thing can fail, things can leak
it's just something that we can't allow. This
proposal originally went to the TC on pipelines of
which I'm a member. We rejected it unanimously.
The technical coordinating committee then said the
pipeline committee jurisdiction ends at the wall and
it went to the medical equipment committee and
somehow it got ground there, I don't know how. But
this is opposed. This connection is opposed by
everyone. The comment to accept this comment is
supported by the American Society of
anesthesiologists, the health care section, ECRI
Institute the Compressed Gas Association. You have
to trust me on this. We can't allow people to plug
into a patient's oxygen system and worse if we allow
one group to do it then there is going to be other
people surely coming down the road saying they did
it we can do it too. This comment has to be
accepted and we have to maintain the integrity of
the patient's oxygen system. Thank you.

MR. BELL: Thank you, Mr. Erickson.

MR. ERICKSON: Thank you, Mr. Chairman.

As Jan mentioned it did go to the Technical
Committee on piped gas originally however as he
mentioned also the piped gas committee their
jurisdiction stops at the outlet on the wall. It
did get to the medical equipment committee and I
would like to ask Alan Lipschultz to address this as
chair of the committee.

MR. LIPSCHULTZ: Alan Lipschultz

Director of Clinical Engineering Christiana
Healthcare Services Delaware, and as mentioned I am
the chair of the medical equipment committee. The
commenter commented on proposal 99-159. And I would
like to point out to the membership that if you look
at comment number 99-298 the committee modified
their original proposal in the report on comments.

No longer restricting it just to sterilizers but instead addressing to the general case and added some additional requirements in there. The committee did accept that its own proposal to modify what it originally had done. It is fair to say before somebody points it out that the motion was not unanimous at the committee ballot level that two members of the committee took strong exception to the committee’s action but nevertheless it did pass strongly at that committee. And basically what the committee is saying with appropriate safeguards that other equipment can be connected to that outlet, not saying it's a good idea saying it can be with certain precautions taken but it doesn't require that anybody connect anything to it just that it can be done.

MR. BELL: Thank you. Microphone 5.

MR. BARKER: Steve Barker, again the incoming delegate from the American Society of Anesthesiologists. I will be brief and not repeat everything Doctor Ehrenwerth said. He pretty much said it all.
MR. BELL: Speaking for the motion?

MR. BARKER: I'm speaking for the motion, sorry. Speaking for the incorporation of comment 99-297. Thank you. As an anesthesiologist who was once an engineer as Jan says nothing is idiot prove foolproof and that is a slippery slope. We consider the oxygen supply in the operating room to be sacred. It's literally the patient's life line. And if anything even has a slit risk of compromising the safety of that lifeline then we don't want to go in that direction. I think anesthesiologists would be united in this. Thank you.

MR. BELL: Thank you. Microphone 5.

MS. McLAUGHLIN: Susan McLaughlin MSL Healthcare Consulting speaking on behalf of the healthcare section and in favor of the motion. This morning at executive board and membership meeting the healthcare section voted in support of this motion.

MR. BELL: Thank you. Seeing no one else -- microphone 5 again.

MR. EHRENWERTH: Just to address --
MR. BELL: Speaking for the motion?

MR. EHRENWERTH: I’m speaking for the motion against. And I do appreciate the committee did try to modify it to make it a little bit safer but again, any risk here is an unacceptable risk and there simply is just no real good reasons to allow a connection to oxygen pipeline much less for a sterilizer that has a readily available oxygen source that is not a danger to the entire oxygen supply at the hospital. Thank you.

MR. BELL: Thank you. Seeing nobody at a microphone we move to the vote on the motion to accept comment 99-297. All those in favor please raise your hand. Thank you. All those opposed. Motion carries. My understanding of the maker of the motion for 99-41 and sequence number 99-42 has notified NFPA that they no longer intend to pursue the motion. We’ll move on to motion sequence number 99-43.

MR. HIRSCHLER: Mr. Chairman it is correct I will not make the motion for 41 or 42. Marcelo Hirschler GBH International. I hereby move to accept comment 99-325.
MR. BELL: The motion is to accept comment 99-325. Is there a second.

THE FLOOR: Second.

MR. BELL: Please proceed.

MR. HIRSCHLER: The committee discussed this issue and replaced the wording that they had by using wording saying that the conductor shall be insulated with material that is flame retardant or fire resistant. As I point out in my substantiation the terms flame retardant fire resistant have no meaning in isolation of the yard stick. There is no yard stick being presented. At the time the committee met, they were not aware of the requirements that existed already in the National Code or requires cable they were very concerned with getting the most severe application of prior safety for both power cables and communication cables. Looking at the type of test methods that exist in the National Electrical Code for both power cables and communication cables, I chose to put the UL 685 CSA version in here and the committee chose to hold because it did not have expertise in the matter. In the meantime I’ve talked to the committee chair and
he felt that but I don't want to put words in his
mouth but my understanding is that he understands
the position so I hope that the membership will
support this motion so that we have actual
requirement for the wires and cables in these
locations as opposed to just unenforceable
requirement as flame retardant or fire resistance,

MR. BELL: Thank you. Mr. Erickson.

MR. ERICKSON: Yes. What I would like
to do is recognize the hyperbaric chair Mr. Rob
Sheffield please.

Mr. Sheffield: Bob Sheffield with
International chair of the HEAY committee. The
committee decided to whole the action they
understood the intent and agreed in principle but we
were unfamiliar with the test standards that was
referred to by submitter, also unfamiliar with the
submitter's expertise at the time. So the
committee's action was to hold it for the next
cycle. Personally I have spoken to the submitter
since this time. I'm confident in his expertise in
recommending this particular standard still haven't
reviewed it for content and I can't speak for this committee but personally I'm comfortable with the recommendation.

MR. BELL: Thank you. Microphone number 4.

MR. HICKMAN: Thank you. Palmer Hickman speaking for myself. I would like to call the question.

MR. BELL: Motion has been made to close debate. Is there a second.

THE FLOOR: Second. I hear a second. All those in favor of closing debate raise your hand. Thank you. All those opposed. Motion carries.

We move directly to the motion on the floor which is to accept comment 99-325. All those in favor of this motion please raise your hands. Thank you. All those opposed. Motion carries.

Before we move on to the last motion sequence number, I want to ask if there are any followup motions at this point? Seeing nobody at the microphone we are going to move to the last sequence which is 99-44. Is there a motion on the
MR. ALLISON: Malcolm Allison National Fuses Association I move to return the whole document.

MR. BELL: So the motion on the floor is to return the entire report. Is there a second?

THE FLOOR: Second. I hear a second.

Please proceed.

MR. ALLISON: I want to send this 99 document back to committee because from today's discussions it's fairly obvious to us that the 99 committee has overlapping responsibilities with the NEC. Healthcare essentials, electrical systems are not totally unique entities. Whereby the 99 committee can set any requirement they want without encroaching on and requirement of the NEC.

Healthcare essential electrical systems have many conditions and equipment that are not materially different than those found in any other similar large documents. These are systems that equipment where the NEC established requirements -- sense of standard work. The NFPA 99 committee statement proposal 99-108 partially recognized the fact and I
quote although some functioning of the essential
electrical system do have commonality with emergency
and standby systems and others, there are many
patient care related functions that are uniquely
performance rated and related and apply only in the
healthcare environment unquote. Why didn't the
segregate the requirements to only items unique to
healthcare. If they had we probably wouldn't be
having this anguish. We heard today that was known
technical substantiations 99 developed less
restricted requirements for selective coordination
that at least 4 code-making panels have perfected
over 3 cycles. It is eliminated -- on requirements
found in Article 700 these are conditions, these are
for conditions or equipment that are for life safety
and needs whether in hospitals, university, or high
rise or other places. What we have heard today is
the cycle, what about future cycles. 99 and Article
517 are set up to be always out of correlation even
article 517 is automatically updated to the dictate
of NFPA 99. The NEC and NFPA 99 is set up on
different provision cycle year. What happens during
the next cycle, Panel 15 does not accept all NFPA 99
changes. Or NEC panel 15 accepts proposals different or in conflict with NFPA 99. It gets worse. Some jurisdictions are struck NEC adoption process out for of years. Even worse. The conflicts are not going to be just between 99 and 517. This NFPA 99 conflicts with other at least 6 other NEC articles also about correcting the scope redundancy who knows what NEC articles would conflict in the future. So I urge you to support my NITMAM.

MR. BELL: Thank you. Mr. Erickson.

MR. ERICKSON: Thank you, Mr. Chairman.

Mr. Chair, ladies and gentlemen of the assembly, I stand before you to let you know that the Technical Correlating Committee and the Technical Committee of NFPA 99 project worked very hard to get this document ready for presentation today. It appears that a different faction of this assembly is not satisfied with one of the outcomes and therefore wants to return this entire document back to committee. The LP proposals and ROC comments of NFPA 99 document, that they are using to return these all had a vote of affirmative of 18 to 1
negative. All these sections had hours if not days' worth of debate at both the proposal and the committee, in the comment meetings. I've also been instructed by NFPA staff there is an ANSI document, that as an ANSI document I should say, that if this document does not get published within 10 years from the time of its last publication, that it goes away completely leaving us without any document that deals with medical gas systems, electrical systems and healthcare facilities, without any emergency management security. All the good things that we have within our NFPA document. This is an ANSI standard that says no extension of time beyond 10 years from the date of approval shall be granted for action on a standard. In no case shall standard maintain its status as a current American National Standard beyond 10 years from the date of approval. Such approval automatically expires on the 10th anniversary date of the approval as an American National Standard. I urge you to take a look at what has been talked about today. Take a look at all the good that 99 has in this document, the years that it
has been in existence, the amount of time that these
committee members have dedicated their time and
their careers to NFPA 99. Thank you, Mr. Chair.

MR. BELL: Thank you. Microphone 5.

MR. MARSHALL: Bob Marshall, Herzig
Engineering, speaking on behalf of Bob Herzig
speaking for this proposal. This whole document
needs to be sent back to the Technical Committee.
It's an embarrassment but it's the only way to
preserve the professional NFPA process we have
today. We heard today that the NFPA 99 Technical
Committee left out numerous key safety requirements
as a result of their amendment to divorce from NEC
Article 70O. Those requirements included ground
fault signalling, hosting of the course of action to
be taken after a ground fault, loss of the option to
forego alternate source equipment ground fault
protection, marking of emergency system enclosures,
signage of service entrance equipment showing high
and location of emergency sources, mechanically held
automatic transfer switches, temporary alternate
source, normal emergency generator is out for
repair, prohibition of 3 or 4 way lighting switches,
accessibility of emergency lighting switches, and
finally emergency lighting continuation while normal
lighting is turning on.

We heard the requirements for selective
coordination have been gutted. Without any
technical substantiation so healthcare facilities
would now be permitted to be designed and installed
so that their systems will be much less robust and
similar facilities that have similar emergency
systems. We heard that 4 national electric code
panel have discussed and voted down similar proposed
changes citing safety and reliability as the major
concern. We also heard that money and banking
centers voluntarily install full selective
coordination but we’re gutting the requirement for
healthcare. We have seen the NFPA 99 committee has
trespassed on the domain of National Electric Code
as they’ve eliminated or reduced requirements from
systems and equipment that we have come to expect
will not cause bodily harm or property damage,
risking the lives of patients, staff, visitors,
firemen, and other first responders. The purpose of
Section 1.2 in NFPA 99 document now lists
installation this is a conflict with the National
Electric Code. The document is flawed in numerous
places and conflicts with NFPA 20. It may cause
issues with ANSI for jurisdiction, also reduce
safety and threaten the NFPA process.

I urge you to vote for this amending
motion and send the whole document back to the
Technical Committee. Thank you.


VOICE: Clark associates speaking for
myself. To me, motions to return to committee
should be based on a multitude --

MR. BELL: Speaking for or against.

VOICE: Yes speaking against the
motion. Should be motion to return based upon a
multitude of issues. We all remember a couple of
years ago about return to committee in Chicago but
we heard probably dozens of things different things,
procedural things, items conflicting with each
other. This is the situation where a couple of
comments got rejected. The technical committee
chair has addressed the scope and issues and
addressed that the standard council has given these
scoping issues to the healthcare committee.

MR. BELL: Thank you. Microphone 1.

MR. HICKMAN: Thank you. Palmer Hickman, representing myself. Yes, thank you for reminding us that this document got sent back. I think it was two meetings ago and quite frankly I don't see anything much different in it then other than I just saw the committee remove two chapters that they finished. So this causes me great concern. Again I am on the NEC technical correlating committee and we had a conference call just a couple of weeks ago and probably spent 2 hours of great concern of this and we voted to return the document. Again we were told we couldn't have an opinion. So I'm not speaking for the TCC and they don't have an opinion. However, I think you certainly heard from many folks that have a lot of concerns with the correlation issues between the two documents. It was sent back before. I really don't see anything changed. I think it needs to be sent back again. Thank you very much. I support the motion.

MR. BELL: Microphone number 6.
MR. BEEBE: Chad Beebe American Society of Healthcare Engineering, and really all I have to say is wow. We just sat here and debated this all day long and it comes down to one issue that was beat 18 to 1 in the Technical Committee and the assembly has voted against it and we're holding out for that one little issue. My suggestion is that if you want this selective coordination in this document, you come back with real substantial data for the committee to consider for the next cycle but now is not the time to return the entire document for this one issue. Just like Jim Lathrop said last time there was a multitude issues. There is only one issue that is hanging out here right now and that's selective coordination. I urge you to vote against this motion.

MR. BELL: Microphone number 5.

MR. LIPSTER: Thank you, Mr. Chairman.

Steve Lipster with the electrical workers. I rise for the motion. Brothers and sisters my take-away is very simple, it's okay for NFPA code to step all over sister codes. That's not a problem. Create conflicts where none should exist, that is okay.
But when we think about conflicting with an ICC code oh, my God we have to back off. That's troubling. Troubling we can get a hornet's nest within our own house but we go after our competition we're going to take three steps back. The thing stinks. Let's send it back.


MR. WALLACE: Mike Wallace speaking for myself. I want to call the question.

MR. BELL: Motion on the floor is to close debate. Is there a second.

THE FLOOR: Second.

MR. BELL: I hear a second. All those in favor of closing debate please raise your hand. Thank you. All those opposed. Motion carries. So we'll move directly to the motion on the floor which is to return the entire report. All those in favor of this motion please raise your hand. Thank you. All those opposed. Motion fails. Thank you, Mr. Erickson.

I did want do have an announcement before we close the session that the schedule for buses has been extended so it should be out there
for you to take you where you need to go. This
officially closes the portion of the 2011 Annual
Technical Association meeting. We'll reconvene
tomorrow morning at 8:58 a.m. I want to thank you
for your participation and support.

(The proceedings adjourned
at 8:11 p.m.)
CERTIFICATE

I hereby certify that the foregoing 172 pages contain a full, true and correct transcription of all my stenographic notes to the best of my ability taken in the above-captioned matter at said time and place.

___________________________________
Carol DiFazio
Registered Professional Reporter