



International Electrotechnical Commission
Commission Electrotechnique Internationale
МеждународнаяЭлектротехническаяКомиссия

The IEC Process: An Overview

- *What is the IEC?*
- *What is overall structure?*
- *How the IEC standards development process works?*
- *Current status of Asian Country participation (eg voting, observer, non-member)*

28 October 2009



International Electrotechnical Commission
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Owen Manley

- IEC Technical Committee TC34 Lighting was member of IEC Standards Management Board
- Chairman – Australian Standards Committee EL/41 – Lighting
- Technical Manager – Lighting Council Australia

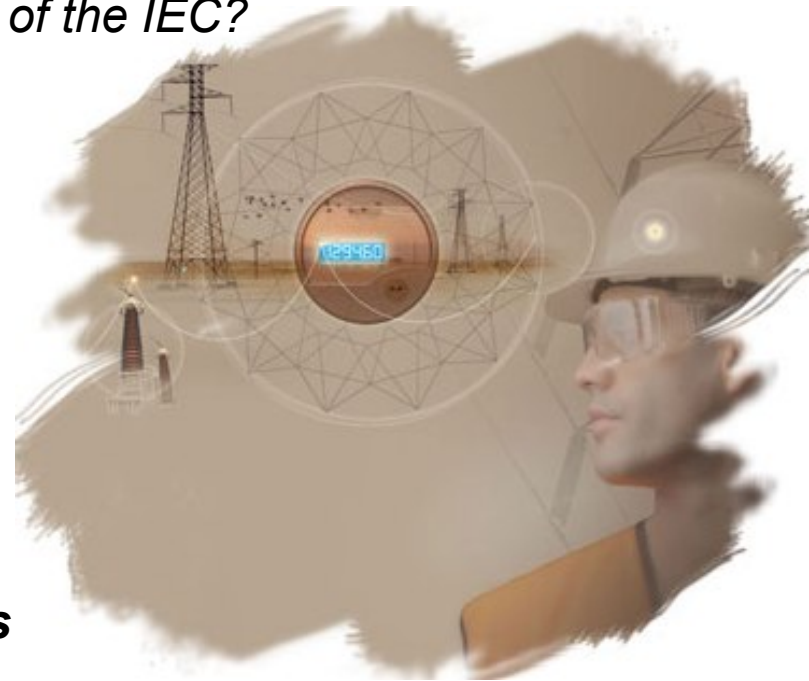




The IEC Process: An Overview

- *What is the overall structure of the IEC?*

What is IEC?



Google “IEC standards” : 1, 140, 000 hits

The International Electrotechnical Commission (IEC) is the world's leading organization that prepares and publishes International Standards for all electrical, electronic and related technologies

- collectively known as ["electrotechnology"](#).

Wherever you find electricity and electronics, you find the IEC supporting electrical safety, performance, energy efficiency and the environment



The IEC Process: An Overview

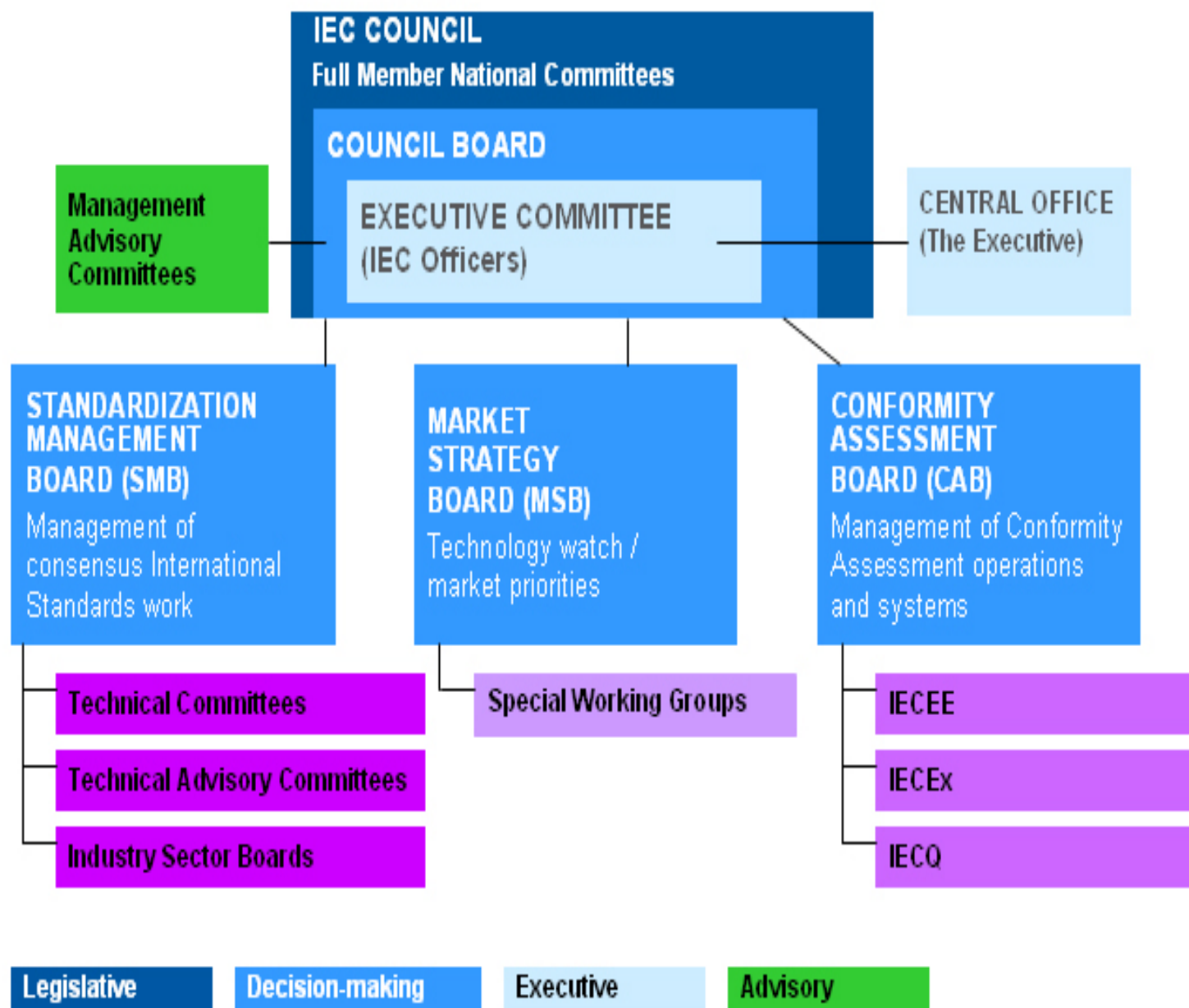
- *What is the overall structure of the IEC?*

The World of the IEC

*Spend a few minutes to see
IEC Standards in the world
around you.?*

*IEC Central Office is in
Geneva.*







The IEC Process: An Overview

- *How the IEC standards development process works?*

IEC membership is only open to countries.
(Not regional organizations, companies or individuals).

An IEC member is called a National Committee

Each NC represents its nation's electrotechnical interests in the IEC management and standardization work.

Participating - “P” members - Vote and comment on documents

Observers - “O” members - NO vote but can comment on documents.



The IEC Process: An Overview

- *How the IEC standards development process works?*

Membership

56 Full member countries

20 Associate members
(P member of 4 committees)

} **76 National Committees - Voting members.**
(P members of committees have vote).

83 affiliate countries - Observer members

Helps developing countries set up and develop their own national electrotechnical committees to gradually embrace international trade and commerce.

ONE VOTE per FULL MEMBER COUNTRY

USA = 1 vote

EU, if all 28 countries vote = 28 votes

Asia - presently 7 votes but could be many more.



The IEC Process: An Overview

- *How the IEC standards development process works?*

Technical work (as of end 2008)

TC	<u>Committees/</u>	SC	<u>SubCommittees</u>	174
			+ Working groups	505
			+ Project teams	273
			+ Maintenance teams	486

Lighting Tc34

4 Subcommittees
4 (WG=Panels)
6 Project teams + ad hoc
4 MT

Total active projects 1 399

Total publications	6 027	International Standards	5 425
		Technical Specifications	195
		Technical Reports	340
		IEC-PAS	63

Published in 2008	559	International Standards	483
		Technical Specifications	32
		Technical Reports	23
		IEC-PAS	20

Average development time for IEC publications in 2008 30 months

Best time ~ 15 Months

Worst ~ 10 - 15 Years



The IEC Process: An Overview

*Current status of **Asian** Country participation
(eg Member, voting, observer)*

IEC "ASIAN" MEMBERS	Member Type	"P" member	"O" member	Lighting
COUNTRY		Participants in all IEC TC	Observers in all IEC TC	Present P members in lighting committees
Australia	Full	80	62	1
China	Full	173	1	1
India	Full	71	82	
Indonesia	Full	17	49	
Japan	Full	171	2	4
Korea	Full	139	32	4
Malaysia	Full	17	77	
New Zealand	Full	33	84	1
Pakistan	Full	9		
Philippines	Full			
Singapore	Full	8	88	
Thailand	Full	29	47	1
Vietnam	Associate			



The IEC Process: An Overview

- *How the IEC standards development process works?*

The National Committee handles the participation of its experts.

The IEC standards work is carried out by 174 technical committees (TCs) and subcommittees (SCs).

These manage about 1260 working groups, project teams and maintenance teams.

There are about 10 000 experts worldwide.

The majority come from industry, with others from commerce, government, test laboratories, research laboratories, academia and consumer groups.



The IEC Process: An Overview

- *How the IEC standards development process works?*

Technical committees prepare documents on specific subjects within their scope, ie lighting

Documents are then submitted to the full member National Committees ([IEC's members](#)) for vote/approval as an international standard

Distribution of documents for standards production is 100% electronic, to improve efficiency and reduce costs

All IEC standards development are subject to a procedure with a maintenance cycle appropriate to the technology



The IEC Process: An Overview

- *How the IEC standards development process works?*

IEC produce standards.

Process?

The "Maintenance Cycle Report (MCR) and its maintenance result date (MRD) determine the life of a standard before the next edition

The standard will remain unchanged until the MRD.

At the MRD, the standard will be:

- reconfirmed,
- withdrawn,
- replaced by a revised edition or
- amended.
- It shows the expected dates for CD, CDV, FDIS and next publication date



Maintenance Cycle - Normal Document Flow

LAST STANDARD / AMENDMENT PUBLISHED

or

NP

NEW WORK (Standard) Proposal.
Vote and min 4 - 5 experts.

Draft for
Comment

DC

Early stage draft circulated for comments

INF

Information on comments received

Maintenance
Cycle Report

MCR

Provides project time frame for CD, CDV, FDIS, and date of next publication. Start of IEC time measurement to finish

Committee Draft

CD

Good draft circulated for comments. (If controversial may circulate 2 or 3 CD)

Compilation of
Comments

CC

Information on comments received

Committee Draft
for Vote

CDV

VOTE and last stage for technical changes. If controversial may need 2nd CDV (rare)

Result of Voting and
comments on CDV

RVC

If CDV, + vote & no comments, go straight to publication.

Final Draft International
Standard for **VOTE**

FDIS

No technical changes. Only Publish or Stop.

Result of Voting on FDIS

RVD

FDIS approved for publication or not.

NEW STANDARD / AMENDMENT PUBLISHED

Standard / Amendment preparation - Approx 18 to 36 months



Recent **lighting** committee voting result by country

Country	Status	Vote	Country	Status	Vote
Australia	P	Y	Mexico	P	A
Belarus	O	Y	Netherlands	P	N
Belgium	P	N	New Zealand	P	A
Canada	P	Y	Norway	P	Y
China	P	Y	Poland	O	Y
Denmark	P	Y	Portugal	P	Y
Egypt	c	Y	Romania	P	Y
Finland	P	Y	Russian Fed.	P	Y
France	P	Y	Saudi Arabia	P	Y
Germany	P	Y	Serbia	P	A
Greece	O	Y	Slovenia	P	Y
Hungary	P	A	South Africa	P	Y
India	P	Y	Spain	P	Y
Ireland	Not P or O	Y	Sweden	P	N
Italy	P	Y	Switzerland	P	Y
Japan	P	Y	Thailand	P	Y
Korea (Rep. of)	P	Y	U.S.A.	P	Y
Malta	P	A	United Kingdom	P	Y

Voting result. Passed

Group Votes

EU 18

Asia 7 (AU, CN, IN, JP, KR, NZ, TH)

Canada }
USA } 3
Mexico }

Russia 1

S Arabia 1

S Africa 1

Total 30 of 76 countries

Others: IEC members but NO lighting representative.

Philippines, Pakistan, Indonesia, Singapore, Malaysia, Vietnam*, Sri Lanka*

* Note. Only P members votes are counted.



The IEC Process: An Overview

*Current status of Asian participation
(eg voting, observer, non-member)*

There are 6 other Asian countries that can be involved.

Consider assisting some countries to become participating members from :

- **Associate** members; Vietnam & Sri Lanka to full members,
- **Affiliate** members; Cambodia, Fiji, Bangladesh, Brunei, Nepal, Seychelles, Bhutan, Myanmar to full or associate members.



Benefits of IEC membership

IEC provides:

- uniformity, less deviations among countries to aid communication, avoid confusion and facilitate trade.
- Involves all market areas
- Develops a forum for formal communication networks that cross international boundaries
- a place where participants can network with customers, manufacturers, technical experts and government representatives
- Situation where small countries and companies are equal partners with big countries/companies

For the private sector

- builds acceptance in global markets
- influence the content of standards
- develop early intelligence
- access the latest technology
- use and develop customer networks
- save time and money
- improve safety and quality of products and services

For the public sector:

international standards are a source for legislation or regulation as well as providing detailed technical interpretations.

Involvement in IEC standards work contributes to a countries fulfilling responsibilities under the World Trade Organization's Agreement on Technical Barriers to Trade.

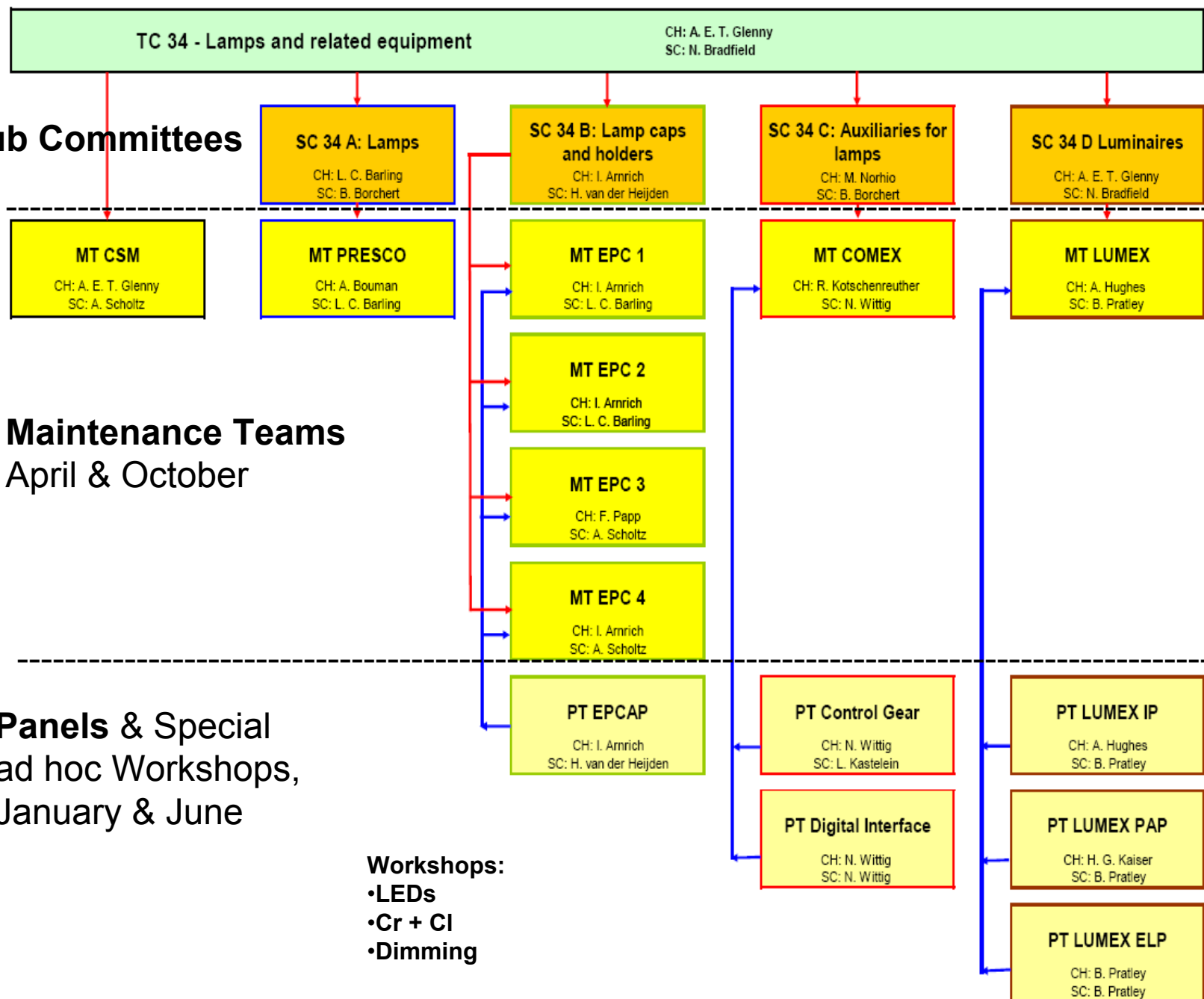
This adds up to reduced transaction costs, time and increased trade



The IEC and Lighting Standards

The IEC process for Lighting Standards Development

- *What is the structure of lighting standards group,*
- *Who is involved and how do the groups work/interact?*
- *What is the current status, plans for the various lighting standards and likely revisions?*

Sub Committees



The IEC and Lighting Standards

What is the structure of IEC lighting standards group

IEC Lighting meetings

	2009		2010
Date	Location	Type	Location
Jan	USA	Panel	UK or USA?
April	Korea	Maintenance Team	Japan
July	Germany	Panel	Germany
October	Finland	Maintenance Team	Seattle USA*

Maintenance Team

Sc/MT meetings are official review and make decision meetings.

Only P member can vote but most meeting decisions by consensus

Only P National Committees can vote at official NP, CDV or FDIS

Panels are expert working group and workshops used to analyse and make recommendations to maintenance team.

Panels may involve any expert. They do not need to be members.

Seattle is IEC General Assembly meeting. Tc34, Sc and MT meetings.



The IEC and Lighting Standards

What is the structure of IEC lighting standards group

Technical Committee 34

“Lighting and related equipment”

Sub-Committees:

A – Lamps

B - Accessories (lampholders

C - Control gear (ballasts etc)

D – Luminaires

Maintenance Team:

PRESCO

EPC

COMEX

LUMEX



The IEC and Lighting Standards

What is the structure of IEC lighting standards group

SubCommittee	MT	Standard	Published	WIP
34A - Lamps	PRESCO	37	159	21
34B - Accessories	EPC	8*	24	28
34C - Control gear	COMEX	25	105	13
34D - Luminaires	LUMEX	26	94	6
	Total	96	382	68

Standard - an individual document. It may have 0 - 3 amendments

.

Published - includes: amendments, corrections, English, French, Spanish editions

WIP - work underway, in progress, new work, amendments etc

* 8 standards, some 4 parts, “database” ~30 amendments each



The IEC and Lighting Standards

What is the structure of IEC lighting standards group

SubCommittee	WIP	– done by maintenance team
A - Lamps	21	PRESCO
B - Accessories	28	EPC
C - Control gear	13	COMEX
D - Luminaires	6	LUMEX
Total	68	projects under way

Last meeting 6 new projects discussed.



The IEC and Lighting Standards

What is the structure of IEC lighting standards group

IEC TC34 Lighting

- Very active
- Meet regularly
- Considerable maintenance on existing standards caused by new technology, electronics, higher frequency operation, dimming, product compatibility, other standards changed
- New work in LEDs and energy efficiency
- Customer expectations, quality, energy efficiency
- Dominated by EU, CENELEC has parallel voting and special agreements on adoption of IEC standards.
- Asia & future??



The IEC and Lighting Standards

Who is involved and interact

Result by Groups

Group	Votes	Group	Votes
		Russia	1
		S Arabia	1
EU	18	Total	2

(Good interaction
between ~6 members)

**USA, Canada, Mexico, S Africa, have voted
with AU/NZ on other issues.**

**Then balance becomes 18/2/19 and there are
~7 other Asian countries that could be
involved.**

Group	Votes
Active Asian members	7
(AU, CN, IN, JP, KR, NZ, TH)	
Other Asian members	5
(PH, PK, ID, SG, MY)	
Others	
Vietnam*	1
Sri Lanka*	1
S Africa	1
Canada	1
USA	1
Mexico	1
Total	19

* Observer status



The IEC and Lighting Standards

What is the current status, plans for the various lighting standards and likely revisions?

CFL

PRESCO is maintenance team responsible

Project leader is O. Manley

- Amend 60969 (CFL performance)
Next CD (Committee Draft) due by 30/11/09
Open 3 month comment period
- Issue CDV – open 5 months, comment and vote
- Issue FDIS – open 2 month, vote no technical comment
- Publish approx 15 months Q2 2012.

CFL compatibility

Reported the CFL dimming panel agreed to set up small team from combined technical committees Tc17, 23, 34 & 77 to cover specific details of dimmers and electronic switches.



The IEC and Lighting Standards

What is the current status, plans for the various lighting standards and likely revisions?

IEC 62554 Mercury measurement for fluorescent lamps

- NEW STANDARD
- *Note 34A/1344/CD*
- *Note the CC and comments 34A/1366/CC-*
- *Secretariat response from Mr Papp PRESCO(FP)009*
- *Info on cold spotting method PRESCO(AJB)028*
- Agreed to include annex A.
- Agreed prepare the CDV draft and circulate to the mercury panel for final check. \
- A copy would also be sent for translation.



The IEC and Lighting Standards

What is the current status, plans for the various lighting standards and likely revisions?

IEC 62471 / CIE S 009 Photobiological safety of lamps and lamp systems (TC76) Amd 1 - New Edition 62471-1

IEC TR 62471-2 Photobiological safety of lamps and lamp systems – Part 2: Guidance on manufacturing requirements relating to non-laser optical radiation safety (TC76)



The IEC and Lighting Standards

What is the current status, plans for the various lighting standards and likely revisions?

NEW WORK ITEMS

CCFL Performance - *To await the PAS draft from Korea*

CCFL Safety - *To await the PAS draft from Korea*

EEFL Performance - *To await the PAS draft from Korea*

EEFL Safety 34A/1352/NP issued. Results would be considered at the January workshop.



The IEC and Lighting Standards

What is the current status, plans for the various lighting standards and likely revisions?

NEW WORK ITEMS

LEDs are more complex.

All new work items.

New technology will impact on:

- PRESCO
- EPC
- COMEX
- LUMEX



The IEC and Lighting Standards

What is the current status, plans for the various lighting standards and likely revisions?

NEW WORK ITEMS

- **Non-ballasted LED lamps - Safety requirements**
- **Non-ballasted LED lamps - Performance requirements**

*NP issued**

NP issued*

LED binning - *Consider proposal PRESCO(ASZ)024**

Agreed to consider at LED workshop and take into account ANSI color bins. Dr. Duffy stated that the final proposal should be based on global consensus and on what the user can see. Recommended to quickly produce a PAS since work on binning was going on in different countries and various applications, but not congruently. It was agreed that the workshop should come up with a PAS proposal.

* Results would be undertaken in the LED workshop.



The IEC and Lighting Standards

What is the current status, plans for the various lighting standards and likely revisions?

IEC TR 60972 Classification and interpretation of new products.

TR IEC 62504 Definitions for LED and LED modules

IEC 62532 Fluorescent Induction Lamps - Safety requirements
NEW STANDARD

IEC 62639 Fluorescent Induction Lamps - Performance
NEW STANDARD

IEC 62031 LED modules for general lighting - Safety
Ref to 60598-1 Marking and Information for luminaire design

IEC 62560 Self-ballasted LED-lamps for general lighting services
>50V - Safety Edition 1, Concerns on G7 LED fit

IEC PAS 62612 Self-ballasted LED-lamps for general lighting
services > 50 V - Performance requirements Edition 1

IEC 62612 Self-ballasted LED-lamps for general lighting services
> 50 V - Performance requirements – NEW STANDARD



The IEC and Lighting Standards

What is the current status, plans for the various lighting standards and likely revisions?

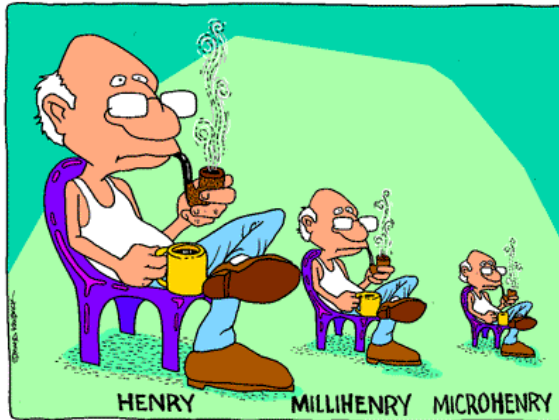
LED and OLED standards - Presentation from Korea

Korean proposal for a new SC on OLEDs.

Chairman advised 34A covers lamps, other SCs cover components and luminaires. Therefore Tc34 already has a structure that can handle this new work. The next stage would be for Korea to provide proposals on safety and performance.

Korea to attend Chairmen/Secretaries meeting (CSM) to present and discuss proposal for decision

Questions & Thank you



A few
electrical
analogies

