

Meeting Report

Inter-Jurisdictional Regulatory Collaboration Committee

and

CIB TG37 (formerly TG11)

Edinburgh, Scotland

19th - 21st October 1998

Attendance

- Bob Bowen (Chair) – NRC, Canada
- Mike Balch – ABCB, Australia
- Mohammed Basheer – Queens University, Belfast
- Douglas Beller – NFPA, US
- Olav Berge – BE, Norway
- Wayne Bretherton – ABCB, Australia
- Richard Bukowski – NIST, USA
- Jeff Carter – Scottish Office, UK
- Brian Cashin – BIA, New Zealand
- Phil Cornish – Scottish Office, UK
- Paul Everall – DETR, UK
- Yoshinobu Hirano – BRI/MOC, Japan
- Brian Meacham – SFPE, USA
- Tomiyoshi Ogawa – MOC, Japan
- Tony Rackliffe – BBA, UK
- Norbert Schmidt-Ludowieg – DIBT, Germany
- Nico Scholten – TNO, The Netherlands
- Nigel Smithies – BRE, UK
- Paul Stollard – Scottish Office, UK
- David Stone – Scottish Office, UK
- Bob Summerville – DIST, Australia
- Russ Thomas – NRC, Canada
- Jon Traw – ICBO, USA
- Beth Tubbs – ICBO, USA

Introduction

Bob Bowen welcomed the participants to the joint CIB TG37/ Inter-jurisdictional Regulatory Collaboration Committee (IRCC) meeting and he thanked the Scottish Office for hosting the joint meeting. Participants then introduced themselves and provided some background to their interests and involvement in performance based codes.

The chair then provided the background to the meeting and the purpose of the work of the TG. For those who had not been involved in the work of the previous CIB TG11 group, Bob provided a

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short summary of the work and referred them to the TG11 Report that was available in paper format and on the TG's web site at <http://contact.irc.nrc.ca/tg11/>.

Jon Traw then provided a summary of the activities of the IRCC and explained that the group had been formed amongst a number of groups who had moved, or were in the process of moving, to the adoption of performance codes. As the group members had an immediate need for guidance on how to successfully implement these codes, they had evolved a fast track development process (over an 18 month period) to establish the Draft IRCC Guidance document. Jon went on to explain that the IRCC members were hoping to obtain a wider input to the draft document and invited the participants to contribute their experiences over the next three days.

The activities of various other groups who were working on associated topics were also presented. Yoshinobu Hirano and Bob Bowen provided information on the activities of ISO/TC59 (see appendix X). In the Asian Pacific Economic Committee (APEC) arena there were reported to be two relevant activities under way, The first of these, TG 1 was reported by Bob Summerville (see Appendix x) and the second (TG 2) by Bob Bowen.

Other groups that were discussed included CIB W14, and a CIB group that was looking at legal aspects, including the impact of performance requirements, on building owners and operators. The activities in the European forum were presented by Tony Rackliffe (appendix x) including the information that some countries were considering introducing requirements relating to the level of radioactivity in timber!

Country updates

Note: These are changes that have occurred since the previous reports of the TG11 group and the Draft IRCC document.

UK (England, Wales & Northern Ireland, Scotland)

- Functional regulations – “reasonable provisions shall be made” is terminology used in some areas where functional levels have not been established
- Looking at impact of Energy efficiency with the need to reduce pollution (gasses) and looking at how to improve it (part L) – consultation document was put out in the spring and an updated version (draft) may be put out next year. – lighting and glazing being upgraded to improve energy efficiency –
- May move regulations to look at existing buildings rather than just new or refurbished buildings (trigger for energy efficiency requirements may be looked at – such as when a building is sold!)
- Looking at accessibility and all new housing will have to be accessible to the handicapped – including an accessible WC on the entry floor – this is going forward and the act (modification) is in progress.
- Updating working document on fire safety (under review)
- Looking at heat producing appliances (sources) and problems with CO killing off people.
- Eng. & Wales does not currently include Electrical requirements (Scotland does include electrical) and this is to be reviewed
- Regulatory impact assessment is now required for each regulation –
- UK is also placing regulations on disabilities – most of the building regulations do not have appropriate trigger actions – act is being set by a different ministry and standards are being established which may not be attainable by many existing buildings
- (see building Control Bulletin for details)

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Australia

- Talked about the technical changes that are to be undertaken – looking at risk assessment (classifications of Buildings/occupancies) and seeing how that will impact the code requirements/needs. Disabilities now in place based upon complaints based act – looking at establishing an acceptable standard that will be deemed to show that the owner has made appropriate provisions to provide access/provisions for the disabled.
- Looking at applying performance to disabilities provisions (the disabled are concerned about the use of performance approach – they prefer prescriptive solutions as they feel it is more certain on what is done)
- Bob Summerville – talked about the legislation (8 sets of legislation – one in each state/territory) not likely to see a consistent legislation but will see consistent administrative procedures/arrangements - 10 year liability run-off is now coming in all states/territories

Norway

- www.bebygg.no
- See the above for a copy of their Technical regulations

New Zealand

- Reviewing and updating their approved documents – and “tweaking” the mandatory components – putting up an amendment to deal with existing buildings – at the moment it is only applicable in extreme cases where they are clearly unhealthy, dangerous or not sanitary – still has a trigger when upgrading takes place – new legislation trying to get the existing code to be seen as the standard to be used when existing buildings need to be compliant (for reference particularly in the case of accessibility).
- Earthquake is still a problem and how to deal with upgrading buildings in this area – technical problem as well as how to trigger these requirements.

USA

- States have the authority devolved to them to establish regulations in the building area. Three model codes now evolving into a single international code for adoption at state, local and municipal. At the same time as forming a single code in a prescriptive format – also looking at a performance document for the codes – at the moment this is a “top down” approach – the US legal environment is quite different from that in other countries and also impact of the US culture. Standards applied to existing buildings are considerably different from the new buildings
- Also covered some of the NFPA activity on the performance approach. Discussion on documentation requirements – new codes are to have both a performance and prescriptive components – (life safety and a number of other documents are about to come available in the near future) -

Germany

- There is to be a new model law available for adoption in the next two years

Japan

- Trade driving the changes – BRI providing the technical input to the changes in developing the new codes – Kobe with 6,000 killed acted to cause a speeding up of the reform process and in March 1997 had a report on developing a amended act and in March 1998 sent a draft amendment bill to the Diet and they discussed the bill and eventually they passed the new bill but a number of issues were raised in the process – (see slides)

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Canada

- See presentation slides (Appendix xx)

Review of our work-plan for the next two days.

There was a discussion on both the IRCC objectives and the rationale for the approach that they took as well as the expectations for the work of the new TG11 replacement group.

• IRCC Document “System Framework”

- Current edition to become, with incorporation of feedback, the “next edition.”
- There was a clear need to “fill gaps” in the current version.

Feedback on current document

- Need for process management information
- Need to manage issues other than just the technology
- The differences between countries/approaches is as important as the commonalities
- Audience seen as those who have started the process to move to performance approach – even prescriptive solutions can be established around the performance required
- Useful as a checklist for the regulators – probably a lot of consideration needed before providing to industry
- Main use seems to be as a tool for the regulator
- Focus should be upon “process”
- Still considerable confusion on what is meant by performance
- Need for examples – technology type examples
- Monitoring the impact of performance codes

CIB Expectations

- Framework, guidance support
- Identify – public policy, infrastructure ...
- Exchange information
- Resource pool

Need to deliver:

- Documents
 - Resource documents
 - Element/issue related
 - Elements of process such as:
 - Education
 - Public policy

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- Workshops/symposium etc.
- Web, bulletin board, etc

Conclusions

The focus of both groups should be upon the development of information (documents) that would be immediately useful and would be accepted under some kind of authoritative body. It was agreed that the international community would certainly recognize both the CIB, due to its long track record, and the IRCC, representing national Code writing bodies and government agencies, as appropriate authoritative bodies on these topics.

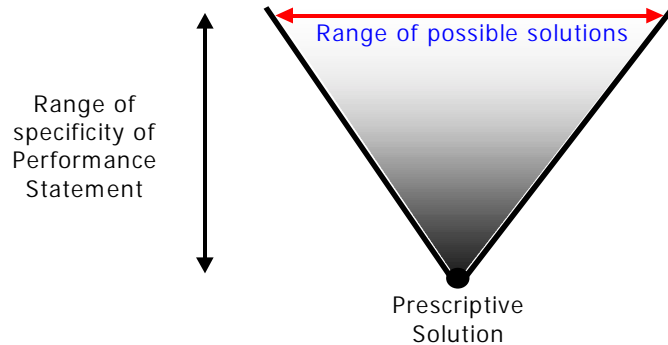
Both groups agreed that there was a continuing and ongoing requirement for a forum for open discussion of issues of common interest.

Detailed discussion on topics

The group reviewed each section of the IRCC Draft document and proposed changes that should be addressed in the next revision of the document.

Technology

It was agreed that there was a need to develop a document that outlined the relationship between the degree of specificity of the performance statements and the resulting range of possible solutions that can be identified to satisfy the performance requirement. (Russ to do a paper dealing with the inverted cone)



It was agreed that the level at which a performance statement is established is dependent upon the degree to which the state of knowledge in any one area of technology is sufficiently advanced that "real" values can be established. This often dictates whether something is placed above or below the "regulatory line".

It was further agreed that this should be titled "science" rather than technology as there is now an input from other disciplines (medicine in the indoor environment, psychologists in the area of fire and occupant escape behaviors, etc.)

The issue of Multiple level of performance needs to be addressed. This should include for example – no complete collapse of building -> operational after quick refurbishment -> provide for mission continuity -> provides for continuing use/operation of the building. This should also include risk/benefit considerations.

Distinguish between human performance issues and those which are based upon material performance issues

Add something on TG15 input from Japan (Diagram A)

Education

Performance based codes "explain" what it is necessary to achieve.

Need for equality when different groups meet so that they are able to communicate on an equal level of understanding.

There is a need to establish a dialogue between the regulators and industry – using common education forums to achieve this.

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Communication should take place between different groups at an appropriate level so that the information/material is “understood.”

Public Policy

80% of these policy issues would occur even without a performance framework being established.

Most of the legislative issues covered in the document is based around a British legal system approach (+ N. America, Australia, NZ, etc)

Need to add into this section “Trade” issues as part of the public policy that a country is operating with – helps to provide a link to those who are involved in trade negotiations

The impact of performance based codes and a general trend of governments to deregulation as part of a broader reform of governments – this is probably not needed in the document at this time.

There is a need to address the concept of “related regulation” and there may be a benefit to looking at some of the implications of this and the complexities that it involves.

Possibly need a statement about public policy – could also take from the “Guest” report (see wording at first sentence of 4.4 [IRCC report] and replace with the relevant [positively expressed] quote from the Guest report (Scottish Office to provide).

The document should provide more coverage with regard to “existing buildings.” How it should be approached? – One approach would be to use the concept that existing buildings have a different “safety factor” (risk level) and that it has be brought up [for a specific element] to a recognized risk level. Alternatively, it could be based on cost/benefit which would result in different levels of safety for a given cost factor.

It was noted that enforcement personnel often seem to be handed down other legislation to enforce “as they are a suitable agency/time to handle this enforcement. This issue should also be addressed (see previous reference to associated legislation).

Depending upon how legislation is enacted there is the issue of relaxing [“relaxation”, “waver” or “variance”] or defining an “equivalency” [meets the aim of the requirement but through a different approach] for a requirement [one cannot “relax” a requirement – a requirement is a requirement].

It was decided that there are no clear advantages to using functional statements or performance requirements within the legislation. Placing performance within the legislation provides different advantages and also different costs. If you place performance within the legislation then you have to provide a mechanism for [“variances”, “relaxation”, or “waver”]. Putting the legislative line above performance (between functional statement and performance statements) then you have greater flexibility in terms of “equivalencies” that meet the functional requirements.

Defining what are “reasonable” criteria/measures/values/etc to be established and issues that should be considered when designing buildings where the legislative line is set either above or below the “functional” level.

Support Framework

Defining performance will help us to understand how to link the standards etc. to the building regulatory system. (we need a good and clear definition of “Performance”)

It was agreed that we need to consider how to handle impact statements and the growing impact of areas/requirements added to a code. In most cases these impose an additional impact upon the owners freedom to make “free” decisions.

The document needs to provide some guidance on how standards can be developed to actively support performance codes. Although how one approaches the use of referenced standards needs further work – there is a need to provide guidance to the standards developers. It is not the case though that all standards should be expressed in performance terms.

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In the text of the document calculation standards and measurement standards [probably a test standard] have been omitted from the list of standards and need to be added. It is also necessary to elaborate on systems as well as products as there is a need to have assurance at both the sub-system and system levels.

(Need to bring in the diagrams that were developed at the Calgary meeting)

Process Management

There is a need to bring in material that looks at process and change management – see how this would provide input to the change process.

There is a need to build strong stakeholder commitment – re-calibration as you move through the process to check that you are still on-line and bringing them with you. To aid this approach there is a need to develop networks – provides a linking together of individuals to support each other when the process is in place.

Need to have an understanding of a quality system and to have it in place when establishing a project – having a quality assurance process in place for the whole project – (cf. Norway).

Providing the appropriate documentation for projects and making them available throughout the life of a building (and after).

Terminology

Needs further work. (cf. "Performance")

Bibliography

Ref 19 needs updating

Proposal for future work – structure of groups

Bob Bowen provided a background on how the activities can be split up between the TG and IRCC and a rationale for this division of work. (See Appendix C)

Concern was expressed that IRCC is, and continues to be, a Pacific Rim activity to the exclusion of the rest of the world. In contrast TG11 has the potential of becoming a Eurocentric forum.

It was agreed that there be a regular joint meeting of the two groups (probably once a year). The IRCC was seen as more of a government related activity as it is clearly related to policy and policy development.

Proposed CIB Plan

Bob introduced the CIB report from CSIRO. It was stated that Jack Snell (NIST) saw this as a process of deriving a taxonomy of performance measures and tests that are available to measure performance. It had been expected that the CSIRO report was to look at all aspects of performance of a building BUT the focus was to have been upon deriving a list and taxonomy of these tools. It was to have been a survey to see what is covered and where the holes are in coverage of these tools in the area of "performance".

The current document does not seem to have followed this initial intent. There does not seem to have been a clear focus and the conclusion from the meeting was that it is unfocused, too broad and not a very practical proposition in its present format. There are though some positive aspects in that it does identify some of the appropriate areas – just lists – there is no framework into which this would clearly fit and it is not clear how this would be implemented.

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Review of actions arising from the document reviews

IRCC	CIB
Document – next version – June, 2000 [Russ put this up on the web and add annotation]	Technology examples
Process management/change management info (transition process) – [Bob Bowen, Bob Summerville]	Implementation strategies
Technology – prescriptive performance (Russ’s triangle) [Russ]	Methods of assessing performance
Multi level performance – introduce concepts [Jon Traw – Brian Meacham, Dug Beller]	Multi-level performance – case studies
Objective “Tree” -> requirements (Brian’s slide) [Jon Traw – Brian Meacham, Dug Beller]	Objective tree
Incorporate input from other legal systems [Brian Cashin – Tony R]	Education – increase manufactures awareness of PBC’s – workshops
Trade discussions– collect discussion under one heading [T Ogawa, Bob Bowen]	Related legislation – cases, application
Related legislation [Mike Balch, Tony R]	Application to existing buildings
Expand discussion on existing buildings [Beth Tubbs, Dug Beller]	Specific guidance to stds. Used in PCB’s framework
Make sure that mandatory line issue is discussed [David Stone, Dug Beller, Russ Thomas]	Relationship to component conformity, assembly/system to overall system performance
Quality systems – relationship to “privatization” [Olav Berge, Mike Balch]	Role of quality systems to support PBC’s

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Technology examples to explain concept (needs to pull in the old TG11 material) [Brian M, Olav, Dug]	Mandatory "line"
	Relaxation/equivalence
	Implementation strategies – case studies

Next Meeting

Meeting in Washington DC next October/November for the TG11/IRCC group

IRCC Meeting in Victoria after the conference around the 16th 17th 18th April (conference is the 12th to 15th April)

Summary of Action Items

IRCC Document related

- Current "next edition" – IRCC – June 2000
 - Need for process management information - IRCC
 - Focus should be upon "transition process" - IRCC
 - Need for examples – technology type examples – TG11
 - Monitoring the impact of performance codes (look at evaluation of the impact of implementing performance approach – needs measurement before the introduction and then following up on impact after the introduction – what do you look at? Probably economic measures but more than just economic impact) – For other CIB group/activity interested in assessing methods of "performance"?
- Technology
 - Do a paper dealing with the inverted cone – IRCC – (Russ)
 - Add something on TG15 input from Japan (Diagram A) – IRCC
 - Multi-levels of performance – TG11(work on concrete examples/case study) and IRCC (introduce the concept)
 - The use of objective structure from objective (level of objective) – Objective tree to requirements/criteria.(see Brian's overhead) - IRCC
- Education
 - Get a dialogue between the regulators and industry/multiplier awareness etc. – using common education – possibly merit in a CIB activity on workshop/seminar
- Public Policy

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- Most of the legislative issues covered in the document is based around a British legal system approach (+ N. America, Australia, NZ, etc) Broaden Input to the document - IRCC
 - Need to add into this section “Trade” issues as part of the public policy that a country is operating with – helps to provide a link to those who are involved in trade negotiations - IRCC
 - This is related to the concept of “related regulation” and there may be a benefit to looking at some of the implications of this and the complexities that it involves. – TG11 (examples/cases application) IRCC (pull together some of this material from different areas in the document)
 - Possibly need a statement about public policy – could also take from the “Guest” report (see wording at first sentence of 4.4 [IRCC report] and replace with the relevant [positively expressed] quote from the Guest report.) - IRCC
 - Should we provide more coverage with regard to “existing buildings” and how should it be approached – could we use the concept that existing buildings have a different “safety factor” (risk level) and that it is has be brought up [for a specific element] to a recognized risk level. – TG11 (case studies) – IRCC (Policy)
 - Equity in the treatment of individuals (human rights etc.) and its relationship to other legislation – to be dealt with under the “Other related regulation heading”
- **Support Framework**
 - Defining performance will help us to understand how to link the standards etc. to the building regulatory system – IRCC by the “cone” TG11 by developing specific guidance to standards bodies.
 - Need to consider how to handle impact statements and the growing impact of areas/requirements added to a code and the additional impact upon the owners freedom to make free decisions – TG11
 - Provide some guidance on how standards can be developed to actively support performance codes. TG11 (see above)
 - How we use referenced standards needs further work – need to provide guidance to the standards developers – TG11 (see above) IRCC (policy on how code users are called to account)
 - Calculation standards and measurement standards [probably a test standard] have been omitted from the list of standards - IRCC
 - Need to elaborate on systems as well as products – need to have assurance at both the sub-system and system levels – TG11
 - Need to bring in the diagrams that were developed at the Calgary meeting - IRCC
 - **Process Management**
 - Look at process and change management – see how this would provide input to the change process – IRCC (to find source and add)
 - Need to have an understanding of a quality system and to have it in place when establishing a project – having a quality assurance process in place for the whole project – (Norway) – TG11

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Other actions

Meeting of the “**European Regulators Group**” next year – basically set up for test methods (fire – reaction and resistance to fire) – contact Paul Overall for details

Question, where do we draw the mandatory line – TG11 - IRCC

Role of relaxation/determination – TG11 and IRCC

IRCC actions

Australia put together a draft of the terms of reference/charter for IRCC membership

AU to act as Sec. For next period

US to do document production – final presentation editing and production

Drafts available by March 24th -> on website.

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Appendix A - Members in attendance at the meeting

Name	Organization	Country	Phone	Fax	Email (Note: all case defaults to lc)
Balch, Mike	ABCB	Australia	+61 2 6 213 7292	+61 2 6 213 7287	mbalch@dist.gov.au
Basheer, Mohammed	Queens University Belfast	UK	+44 1232 274 026	+44 1232 663 754	m.basheer@qub.ac.uk
Beller, Douglas	NFPA	USA	+01 617 984 7477	+01 617 984 7478	dbeller@nfpa.org
Berge, Olav	BE	Norway	+47 22 475600	+47 22 475611	berge@bebygg.no
Bowen, Bob	IRC	Canada	+01 613 993 9503	+01 613 941 0822	bob.bowen@nrc.ca
Bretherton, Wayne	ABCB	Australia	+61 2 6 213 7299	+61 2 6 213 7287	wbretherton@dist.gov.au
Bukowski, Richard	NIST	USA	+01 301 975 6853	+01 301 975 4052	rbukowski@nist.gov
Carter, Jeff	Scottish Office	UK	+44 131 244 7447	+44 131 244 7454	jeff.carter@so062.scotoff.gov.uk
Cashin, Brian	BIA	New Zealand	+64 4 471 0794	+64 4 471 0798	cashin@bia.co.nz
Cornish, Phil	Scottish Office	UK	+44 313 244 7447	+44 313 244 7454	phil.cornish@so062.scotoff.gov.uk
Everall, Paul	DETR	UK	+44 171 890 5720	+44 171 890 5739	peverall@detr-br.demon.co.uk
Hirano, Yoshinobu	BRI/MOC	Japan	+81 298 64 6616	+81 298 64 6771	hirano@kenkenn.go.jp
Meacham, Brian	SFPE	USA	+01 508 752 8239	+01 508 752 8214	bmeacham@sfpe.org
Ogawa, Tomiyoshi	MOC	Japan	+81 3 5251 1913	+81 3 3580 7050	tomiyoshi@hs.moc.go.jp
Rackliffe, Tony	BBA	UK	+44 1252 712 012	+44 1483 426 337	sstevens@waverley.gov.uk
Schmidt-Ludowieg, Norbert	DIBT	Germany	+49 30 7 87 30 216	+49 30 7 87 30 320	dibt-berlin@t-online.de
Scholten, Nico	TNO	The Netherlands	+31 15 284 2166	+31 15 284 3995	n.scholten@bouw.tno.nl
Smithies, Nigel	BRE	UK	+44 1923 664 951	+44 1923 664 910	smithiesjn@bre.co.uk
Stollard, Paul	Scottish Office	UK	+44 131 244 7450	+44 131 244 7454	paul.stollard@so062.scotoff.gov.uk
Stone, David	Scottish Office	UK	+44 131 244 7459	+44 131 244 7454	david.stone@so062.scotoff.gov.uk
Summerville, Bob	DIST	Australia	+61 2 6 213 7708	+61 2 6 213 7253	bobs@dist.gov.au
Thomas, Russ	IRC	Canada	+01 613 993 0817	+01 613 954 0483	russ.thomas@nrc.ca
Traw, Jon	ICBO	USA	+01 562 699 0541 Ext 3228	+01 562 699 8031	traw@icbo.org
Tubbs, Beth	ICBO	USA	+01 562 699 0541 Ext 3303	+01 562 699 4522	tubbs@icbo.org

Appendix B

Excerpt from The CIB Guidelines on Task Groups

4. MEMBERSHIP OF WORKING COMMISSIONS

4.1 CIB depends financially on members' subscriptions. Through these, it is able to provide central services (such as the publication of Commission reports) to members and Commissions. It is therefore vital that those who benefit from CIB's activities and notably members of Working Commissions - should share in their support. Coordinators have a key role in encouraging the take-up of CIB membership amongst the research community in their field of interest. The organisation of high quality meetings etc. will, of course, do much to promote CIB to prospective members.

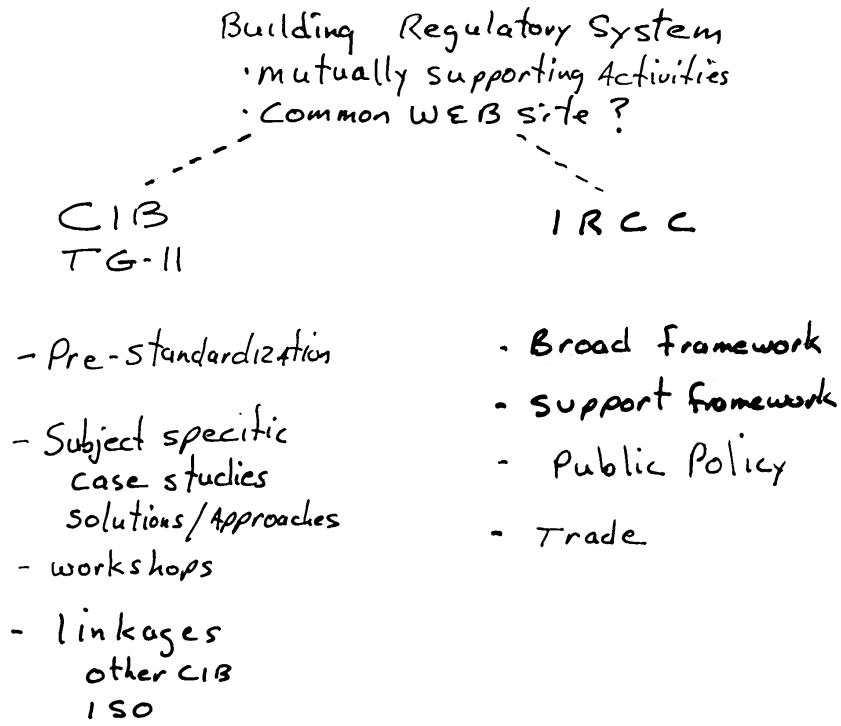
4.2 Members of a Working Commission are expected to be in membership of CIB, either through their institute or employer or as individuals. Any individual not in membership would be expected to attend not more than two Commission meetings before entering one of CIB's categories of membership and formally joining the Commission. The General Secretariat will assist Coordinators in promoting and encouraging CIB membership through provision of information and literature about CIB.

4.3 In order to ensure that Commissions are not so large as to be ineffective, the Coordinator may recommend to the Programme Committee, through the Secretary General, that participation be restricted to selected individuals. The Coordinator should in any case periodically review the contributions made by members and, in order to reduce the expense of operating the Commission, may terminate membership when a member has not been active in the Commission for three years. This will be done in communication with the CIB General Secretariat.

4.4 The Secretary General will inform the Coordinator of any new CIB members who have expressed an interest in the Commission.

4.5 If a Commission proposes substantial changes to its work programme and these are approved by the Programme Committee, the Coordinator should consult existing members over their potential contributions to the new programme, and may recommend changes to the membership according to the outcome of these consultations.

Appendix C



modes of operation

- no restrictions on participation except CIB-TG11 (CIB membership)
- cross circulation of work in progress
- joint meeting each years
- cross membership