Minutes of IEEE SCC21 P1547.3 Draft Guide for
Monitoring, Information Exchange and Control of Distributed Resources Interconnected
with Electric Power Systems
MIC DR Interconnection Work Group (WG) Meeting November 17 – 18, 2005, Golden CO

1.0 Executive Summary
This meeting focus was to complete P1547.3 Draft 3 inputs and establish when we would ballot. We reviewed selected P1547.3 material, established action items, and drafted a work plan and schedule. We focused on P1547.3 document clauses 6, 7, 9, and related annexes. The remaining clauses will be reviewed by the respective writing teams, with the P1547.3 officers covering the front matter through clause 4 and bibliography annex. See past minutes including embedded action items and writing team leads/members, and email archives for reference. The schedule/plan to go to ballot P1547.3 follows.
- December 23, 2005 ballot ready clauses submitted by writing team leads to P1547.3 officers
- mid-to-early January 2006 P1547.3 draft posted;
- Jan 31- Feb 1, 2006 meeting to complete the ballot-ready review of P1547.3;
- Winter 2006 (as soon as practical after Jan meeting) IEEE ballot.

The next P1547.3 meeting will be January 31-Feb 1, 2006 (Atlanta GA, hosted by Georgia Power) as part of the 1547 series meetings – P1547.2, P1547.3, P1547.4, and P1547.6.

2.0 Meeting Notes
The meeting agenda (Annex B) and updated materials were discussed. We focused on P1547.3 clauses 6, 7, and 9 along with their respective annexes. More detailed meeting information is included under the Annexes (especially Annex C). The meeting was opened by the Chair, Frank Goodman and we introduced ourselves. IEEE SCC21 Chair R. (Dick) DeBlasio provided overview comments about 1547 and its implementation, e.g., IEEE Standard 1547 series is cited and required in the US Energy Policy Act of 2005. For most of the meeting, we met in two breakout groups and ended as a full WG session to summarize the progress and status toward going to ballot. The clauses 5 and 8 material were not discussed at the meeting but will be updated in the coming weeks. The P1547.3 clauses 1-4 will be revised by the P1547.3 officers based on final revised inputs for the other clauses. T. Basso reminded the WG, especially the writing team leads that he could arrange teleconference sessions to help the teams complete their final inputs.

See the following annexes for more details.
ANNEX A: Attendees (page 3)
ANNEX B: P1547.3 WG Meeting Agenda and Background Slides (pages 3 - 14)
ANNEX C: P1547.3 WG Deatiled Meeting Notes (page 15 - 19)

3.0 Adjournment
Frank thanked everyone for their participation. (Note: after adjournment, a number of attendees stayed to 4PM to continue working.)

Respectfully Submitted, T. Basso, Secretary P1547.3.
Annex A -- P1547.3 Meeting Attendees Nov 17 - 18, 2005

<table>
<thead>
<tr>
<th>P1547.3 Meeting Attendees Nov 17 - 18, 2005</th>
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<tbody>
<tr>
<td>Tom Basso</td>
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<tr>
<td>David Beach</td>
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<td>Frances Cleveland</td>
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<td>Sean Colgan</td>
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<td>Dick DeBlasio</td>
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<td>Frank Goodman</td>
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<td>Stan Klein</td>
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<td>Joe Koepfinger</td>
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<td>Frank Lambert</td>
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<td>Wayne Manges</td>
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<td>Paul Mattes</td>
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<tr>
<td>Sanjeev Srivastava</td>
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<td>Randy West</td>
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<td>Steve Widergren</td>
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Annex B -- P1547.3 Meeting Agenda and Background Slides

Nov 17 – 18, 2005, Golden CO

P1547.3 Draft Guide for Monitoring, Information Exchange, and Control of Distributed Resources Interconnected With Electric Power Systems

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Email</th>
<th>Phone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frank Goodman</td>
<td>Chair</td>
<td><a href="mailto:fgoodman@epri.com">fgoodman@epri.com</a></td>
<td>(650) 855-2872</td>
</tr>
<tr>
<td>Joe Koepfinger</td>
<td>Vice Chair</td>
<td><a href="mailto:joseph_l_koepfinger@msn.com">joseph_l_koepfinger@msn.com</a></td>
<td>(412) 264-6148</td>
</tr>
<tr>
<td>Tom Basso</td>
<td>Secretary</td>
<td><a href="mailto:thomas_basso@nrel.gov">thomas_basso@nrel.gov</a></td>
<td>(303) 275-3753</td>
</tr>
</tbody>
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Agenda

Thursday Nov 17, 2005

8:00 AM - 8:30 AM Registration
8:30 AM - 9:00 AM Welcome and agenda/objectives review.
9:00 AM - 12 PM (includes break) Status update and discuss harmonization of separate inputs to write Draft 3; organize breakouts.
12 PM - 1:15 PM Lunch on your own
1:15 PM - 5:00 PM Breakouts to review all past action items pertinent to specific clause/chapter; establish harmonized separate final Draft 3 inputs

Friday Nov 18, 2005

8:00 AM- 8:15 AM Registration
8:15 AM - 11AM (includes break) Breakouts to complete Draft 3 inputs.
11AM - 12 PM Establish Final Harmonized Draft 3.
12PM - 1:15 PM Lunch on your own.
1:15 PM - 2:15 PM Review of Draft 3 material.
2:15 PM - 3:00 PM Status discussion; assignments/action items established.
3:00 PM Adjourn. (Meeting room available for ad hoc meeting to 5PM).
ANNEX B: P1547.3 WG Meeting (Agenda and) Background Slides
Note: about half of the following presentation slides were discussed at the meeting.

Slide 1

IEEE SCC21 1547™ Series Standards Development
P1547.3 Working Group Meeting
Nov 17 - 18, 2005; Golden CO

P1547.3 Draft Guide for
Monitoring, Information Exchange and
Control of Distributed Resource Island
Systems with Electric Power Systems

Chairperson: Frank Goodman
Vice Chair: Joe Koepfinger
Secretary: Tom Basso

Slide 2

1547 Series of Meetings: Jan 30 – Feb 3, 2006
Draft Timeline - see each work group agenda for exact times

30 Monday – Arrive
Tuesday – Friday Registration 8:10 – 8:30 AM
Jan 31, 2006 Tuesday
8:10 am – 5pm  P1547.3 (Information Exchange)
8:10 am - 5pm  P1547.4 (DR Islanding Systems)
Feb 1, 2006 Wednesday
8:10 am – 3 pm  P1547.3 (Information Exchange)
8:10 am – 3 pm  P1547.4 (DR Islanding Systems)
Feb 2, 2006 Thursday
8:10 am – 5pm  P1547.2 (Guide to 1547)
8:10 am - 5pm  P1547.6 (DR/Networks)
Feb 3, 2006 Friday
8:10 am – 3pm  P1547.2 (Guide to 1547)
8:10 am - 3pm  P1547.6 (DR/Networks)

IEEE SCC21 P1547 Series of Interconnection Standards Development
Slide 3

Agenda P1547.3 Nov 17 - 18, 2005

- Welcome and Introductions
- IEEE Standards
- P1547.3 Discussion
- Writing Assignments/Next Actions
- Adjourn

Slide 4

Agenda P1547.3 Nov 17-18, 2005

**Thursday Nov 17, 2005**  8:00 AM - 8:30 AM Registration
8:30 AM - 9:00 AM Welcome and agenda/objectives review.
9:00 AM - 12 PM Status; discuss harmonization; organize breakouts.
12 PM - 1:15 PM Lunch on your own
1:15 PM - 5:00 PM Breakouts: review action items; complete inputs

**Friday Nov 18, 2005**  8:00 AM- 8:15 AM Registration
8:15 AM - 11AM Breakouts to complete Draft 3 inputs.
11AM - 12 PM Establish Final Harmonized Draft 3.
12PM - 1:15 PM Lunch on your own.
1:15 PM - 2:15 PM Review of Draft 3 material.
2:15 PM - 3:00 PM Status discussion; assignments/action items established.
3:00 PM Adjourn.
Welcome and Introductions

Please sign in on the attendee list

correct and/or add your contact information

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IEEE Standards Development

IEEE Instructions - the WG membership shall be advised that:

• IEEE’s Patent Policy is consistent with the ANSI patent policy and is described in Clause 6 of the IEEE SA Standards Board Bylaws;

• Early disclosure of patents which may be essential for the use of standards under development is encouraged — WG members should identify or disclose patents that you believe may be essential for the use of this standard; responses (specifically the patents and patent applications identified, if any, and by whom) will be recorded in this meeting’s minutes.

• Disclosures made of such patents may not be exhaustive of all patents that may be essential for the use of standards under development, and neither the IEEE, the WG nor the WG Chairman ensure the accuracy or completeness of any disclosure or whether any disclosure is of a patent that in fact may be essential for the use of standards under development.
IEEE-SA Standards Board Bylaws on Patents in Standards

6. Patents. IEEE standards may include the known use of essential patents and patent applications provided the IEEE receives assurance from the patent holder or applicant with respect to patents whose infringement is, or in the case of patent applications, potential future infringement the applicant asserts will be, unavoidable in a compliant implementation of either mandatory or optional portions of the standard [essential patents]. This assurance shall be provided without coercion and prior to approval of the standard (or reaffirmation when a patent or patent application becomes known after initial approval of the standard).

This assurance shall be a letter that is in the form of either:

a) A general disclaimer to the effect that the patentee will not enforce any of its present or future patent(s) whose use would be required to implement either mandatory or optional portions of the proposed IEEE standard against any person or entity complying with the standard; or

b) A statement that a license for such implementation will be made available without compensation or under reasonable rates, with reasonable terms and conditions that are demonstrably free of any unfair discrimination.

This assurance shall apply, at a minimum, from the date of the standard's approval to the date of the standard's withdrawal and is irrevocable during that period.

Inappropriate Topics for IEEE WG Meetings

- Don’t discuss licensing terms or conditions
- Don’t discuss product pricing, territorial restrictions or market share
- Don’t discuss ongoing litigation or threatened litigation
- Don’t be silent if inappropriate topics are discussed… do formally object.

If you have questions, contact the IEEE-SA Standards Board Patent Committee Administrator at patcom@ieee.org or visit http://standards.ieee.org/board/pat/index.html

Approved by IEEE-SA Standards Board – March 2003 (Revised February 2004)
### P1547.3 IEEE Web Site

P1547.3 public web site (more to add)
http://grouper.ieee.org/groups/scc21/1547.4/1547.4_index.html

- P1547.34 Archives
  - Will include:
    - Meeting information
    - Registration Information – First time attendees, please return a completed registration form (Excel 24 KB) to David Glickson and Tom Basso, the SCC21 secretary, at least two weeks before the meeting. Ongoing attendees, please RSVP and provide any changes to your contact information.
    - Agenda – for most recent meeting
    - Minutes

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### P1547.3 Web Site – Work Group Area

- P1547.3 Work Group Area (password protected)
  http://grouper.ieee.org/groups/scc21/1547.3/private/
  Username p1547.3 password 47dottre
  Will include:
  - Contacts – WG member information (standards development use only).
  - Special Topics - background information for the Work Group.
  - StdDrafts – Drafts under development
  - Listserv – listserv archived emails

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P1547.3 IEEE ListServ
ListServ is for IEEE standards development use only.
IEEE code of ethics identified in Information file sent to each subscriber.

To: stds-p1547-3@ieee.listserv.org
From: you@yourISP.com
Only subscribers can send to the list. Exchanges between individuals and among your self-established small groups are encouraged.

ListServ emails are immediately sent to all subscribers;
  Reply to all – sent to all;
  Reply to sender – only sent to sender.
Email to listserv is auto-archived at
  P1547.3 Work Group Area (password protected)
  at ListServ
Archived emails can be viewed either under
  Subject Thread or Date Thread.

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IEEE Standards Classification

Standard: documents with mandatory requirements
  (shall)

Recommended Practice: documents in which
  procedures and positions preferred
  by the IEEE are presented
  (should)

Guide: documents in which alternative approaches
  to good practice are suggested but
  no clear-cut recommendations are made
  (may)
### Current SCC21 Interconnection Projects

<table>
<thead>
<tr>
<th>Title</th>
<th>Scope &amp; Purpose</th>
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<tbody>
<tr>
<td>IEEE Std 1547™ (2003) Standard for Interconnecting Distributed Resources with Electric Power Systems</td>
<td>• This Standard establishes criteria and requirements for interconnection of distributed resources (DR) with electric power systems (EPS). • This document provides a uniform standard for interconnection of distributed resources with electric power systems. It provides requirements relevant to the performance, operation, testing, safety considerations, and maintenance of the interconnection.</td>
</tr>
<tr>
<td>IEEE Std 1547.1™ (2005) Standard for Conformance Test Procedures for Equipment Interconnecting Distributed Resources with Electric Power Systems</td>
<td>• This Standard specifies the type, production, and commissioning tests that shall be performed to demonstrate that interconnection functions and equipment of a distributed resource (DR) conform to IEEE Standard 1547. • Interconnection equipment that connects distributed resources (DR) to an electric power system (EPS) must meet the requirements specified in IEEE Standard 1547. Standardized test procedures are necessary to establish and verify compliance with those requirements. These test procedures must provide both repeatable results, independent of test location, and flexibility to accommodate a variety of DR technologies.</td>
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### Current SCC21 Interconnection Projects

<table>
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| P1547.2™ Draft Application Guide for IEEE Standard 1547 for Interconnecting Distributed Resources with Electric Power Systems | • This Guide provides technical background and application details to support the understanding of IEEE 1547 Standard for Interconnecting Distributed Resources with Electric Power Systems.  
• This document facilitates the use of IEEE 1547 by characterizing the various forms of distributed resource technologies and the associated interconnection issues. Additionally, the background and rationale of the technical requirements are discussed in terms of the operation of the distributed resource interconnection with the electric power system. Presented in the document are technical descriptions and schematics, applications guidance and interconnection examples to enhance the use of IEEE 1547. |
| P1547.3™ Draft Guide for Monitoring, Information Exchange and Control of Distributed Resources Interconnected with Electric Power Systems | • This document provides guidelines for monitoring, information exchange, and control for distributed resources (DR) interconnected with electric power systems (EPS).  
• This document facilitates the interoperability of one or more distributed resources interconnected with electric power systems. It describes functionality, parameters and methodologies for monitoring, information exchange and control for the interconnected distributed resources with, or associated with, electric power systems. Distributed resources include systems in the areas of fuel cells, photovoltaics, wind turbines, microturbines, other distributed generators, and, distributed energy storage systems. |
| P1547.4™ Draft Guide for Design, Operation, and Integration of Distributed Resource Island Systems with Electric Power Systems | • This document provides alternative approaches and good practices for the design, operation, and integration of distributed resource (DR) island systems with electric power systems (EPS). This includes the ability to separate from and reconnect to part of the area EPS while providing power to the islanded local EPSs. This guide includes the distributed resources, interconnection systems, and participating electric power systems.  
• This guide is intended to be used by EPS designers, operators, system integrators, and equipment manufacturers. The document is intended to provide an introduction, overview and address engineering concerns of DR island systems. It is relevant to the design, operation, and integration of DR island systems. Implementation of this guide will expand the benefits of using DR by targeting improved electric power system reliability and build upon the interconnection requirements of IEEE 1547. |
IEEE 1547 Interconnection Projects

P1547.5 Draft Technical Guidelines for Interconnection of Electric Power Sources Greater Than 10 MVA to the Power Transmission Grid

- This document provides guidelines regarding the technical requirements, including design, construction, commissioning, acceptance testing and maintenance/performance requirements, for interconnecting dispatchable electric power sources with a capacity of more than 10 MVA to a bulk power transmission grid.
- The purpose of this project is to provide technical information and guidance to all parties involved in the interconnection of dispatchable electric power sources to a transmission grid about the various considerations needed to be evaluated for establishing acceptable parameters such that the interconnection is technically correct.

P1547.6 Draft Recommended Practice for Interconnecting Distributed Resources With Electric Power Systems Distribution Secondary Networks

- This standard builds upon IEEE Standard 1547 for the interconnection of distributed resources (DR) to distribution secondary network systems. This standard establishes recommended criteria, requirements and tests, and provides guidance for interconnection of distribution secondary network system types of area electric power systems (Area EPS) with distributed resources (DR) providing electric power generation in local electric power systems (Local EPS).
- This standard focuses on the technical issues associated with the interconnection of Area EPS distribution secondary networks with a Local EPS having DR generation. The standard provides recommendations relevant to the performance, operation, testing, safety considerations, and maintenance of the interconnection. In this standard consideration is given to the needs of the Local EPS to be able to provide enhanced service to the DR owner loads as well as to other loads served by the network. Equally, the standard addresses the technical concerns and issues of the Area EPS. Further, this standard identifies communication and control recommendations and provides guidance on considerations that will have to be addressed for such DR interconnections.

Current SCC21 Interconnection Projects

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Next Actions

- P1547.3 WG volunteers draft inputs
- P1547.3 Draft 3 established/posted
- P1547.3 Draft 3 feedback review prior to next meeting
- Next Meeting: Jan 30 - Feb 3, 2006, Atlanta GA
(IEEE 1547 Developed By National Team of 444 Professionals)

States with Interconnection Mandates

IA, ME, MN, and others are in process or being considered.
And FERC, HTOs/ISOs, MADRI, and others are in process of considering implementation.

Source: Navigant Consulting, Inc. 2005
PJM Interconnect * Small Generator Initiative

- Two Major Goals** (2 MW DG expanding to 10 MW)
  - Standardize interconnection requirements, based on IEEE 1547, throughout PJM business domain
  - Ensure test compliance to IEEE 1547
- PJM initiative allows pre-certification

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Annex C: Detailed Notes of Meeting
(original draft notes by J. L. Koepfinger)

IEEE SCC21 P1547.3 Working Group
Golden, CO, 17 – 18 November 2005

1. Introduction.
   Chair, Frank Goodman welcomed the attendees and noted it was very heartening to see such significant participation. The updated material for the meeting had been distributed electronically before the meeting and that will be the basis of this working session. There were paper copies of P1547.3 Draft 02a at the meeting. Some people expressed the need to have hardcopies of Steve Widergren’s material but we managed with the electronic version. Note was made that high speed wireless interconnection was available.

Agenda

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3:00 PM Adjourn. (Meeting room available for ad hoc meeting to 5PM).

2. Remarks By Dick DeBlasio (NREL) Chair of IEEE SCC 21
   Mr. DeBlasio reviewed the structure of IEEE SSC 21 integrated activities in the development of standards for the interconnection of distributed resources.

   Note was made that IEEE 1547 has been included in the US Energy Policy Act of 2005 with all of its associated standards in the series. There was a brief discussion regarding IEEE dual logo standard with IEC. A couple of slides were shown indicating the USA states that have or are considering interconnection rules, and the region that PJM Interconnect, Inc. encompasses (it was pointed out the PJM slide is already outdated as PJM has continued to expand). PJM is a regional transmission organization whose region now encompasses 110 GW of load in its control area. PJM has written their 2 MW small generator interconnection standard that adopted 1547 and 1547.1, along with a few additional technical requirements. That PJM standard is approved by FERC for use in the PJM region where FERC jurisdiction applies. PJM is now developing a 10 MW standard and communications is the major topic still being discussed. The communications requirements in the 10 MW PJM draft standard goes further into equipment and media and protocols than does P1547.3. There was a brief discussion of the relationship between P1547.3 MIC activities and those of IEEE SCC 36. It was indicated that the 1547.3 is addressing targeted MIC issues of dispersed generators and their interconnection with the grid whereas, SCC 36 has a much broader scope.

   Remarks by Chair of P1547.3 WG
   In response to a question as to the time for the ballot of 1547.3, the chair expressed the opinion that it would be extremely desirable to move to ballot, even if the document has not reached the stage of being extremely refined as of this writing. It should be recognized that at this stage there could be holes in the document and we should try to fill the holes as best as possible.

   a. Interaction between IEC and IEEE regarding the work of P1547.3
      After some discussion it was concluded that this P1547.3 standard was a document that needs to be issued quickly, whereas IEC is developing a body of models as standards.

   b. Report on TC 8 Activities
      Mr. J. Koepfinger USA Co-Technical Advisor for US/TAG/IEC/TC 8 gave a brief review of the two major decisions that occurred at the plenary meeting of TC 8 in Cape Town South Africa in October 2005.

   c. Protocol for the Conduct of this Meeting
      Clauses to be discussed at this meeting are those for which material has been received for discussion, in particularly clauses 6, 7, 8, 9 and associated Annexes. It had been anticipated to have clauses 5, 8 and 9 updated prior to the meeting, but the updates had not been received. It was decided that there would be no breakout on
clauses 1-4, and 5. Depending upon the progress made with clauses 6, 7, 8, and 9 a
decision will be made tomorrow as to the need to have a breakout on clauses 1-4.
Tom Basso pointed out that material in clause 1-4 are greatly dependent upon
the material in the clauses that follows. Note: after the formal adjournment Nov 18, the
P1547.3 officers reviewed clauses 1-4 and established initial edits and the general
path for completing the clauses 1-4 revision with T. Basso to establish that draft for
review by the other officers.

d. Action: Ballot Goal
It was agreed to set the goal to go to ballot as soon as practical after the January –
February 2006 meeting. This information establishes the time table for finalizing
material in the document.

e. General Announcement
At Steve Widergren’s request, the P1547.3 Chair provided a few minutes for Steve to
make a brief announcement regarding a GridWise™ Constitutional Convention that will
be held in Philadelphia 6-7 December 2005. Quoting from the web: “GridWise” is an
entirely new way to think about how we generate, distribute and use energy. Using advanced
communications and up-to-date information technology, GridWise will improve coordination
between supply and demand, and enable a smarter, more efficient, secure and reliable electric
power system. For more information visit -- www.gridwise.com and
http://www.gridwise.com/convention.asp


Two breakout sessions were decided by the attendees: clauses 6, and 7 and related annexes,
and, clauses 8 and 9 and the associated annexes. The breakout sessions continued ran
through the remainder of the first day, and through most of the morning of the last day,
basically according to the agenda schedule. Steve Widergren led clauses 6-7 session, and
Frances Cleveland led clauses 8-9 session.

a. Reports from Breakout Sessions
Following a discussion on definitions arising in the separate clauses, the following
guidance was provided. For definitions within a clause, the clause writing lead needs to
submit those definitions to the P1547.3 officers to move to clause 3. Additional
descriptive information related to those definitions could remain in the respective clauses.

b. Clause 6 and Use Cases (S. Widergren)
The Use-Cases were reviewed. For the new use cases (first drafts received and emailed
prior to this meeting), it was determined not to include in this version of P1547.3 the
following two: Use Case on Voltage Regulation, and the Use Case on Relays. Prior
P1547.3 minutes discussed such topics in general, and it was determined
relays/protection, voltage regulation, and planned islands, that are not within the direct
scope of IEEE 1547, could cause serious delays in the processing of the P1547.3
standard since some of the submitted material has to have more refinement. T. Basso
commented along the lines that the Use Cases are a methodology described in P1547.3
and that use case examples are provided in P1547.3 to show how to use/develop use
cases, but that these use cases are not meant to be a library listing of use cases for MIC
for DG applications.
Stan Klein thought the topic on relays should be addressed somewhere in the earlier clauses of the P1547.3 document to indicate whether or not relay communication requirements should be included as part of this document. It was generally agreed that somewhere P1547.3 text should state that the MIC discussed in this document does not address all aspects of installations, especially those aspects that are not directly stated in 1547 requirements. Frank Goodman suggested that non-type 1547 topics could be included, but it should then be stated that those are representative and there could be a number of other approaches to those applications/use cases.

There was additional discussion associated with the use of Use Cases and if in P1547.3 they are to be strictly in accordance with IEEE Standard 1547. The following was the general resolution. In clause 1 (or other location as fitting) indicate that the Use-Cases that are included in the document are representative of several type of installation that would be encountered in the use of IEEE Standard 1547, but there are other applications not within the purview the 1547, but which have not been addressed at this time. This statement would apply to using DR for voltage support and MIC for protection.

c. Clause 7 (S. Widergren)
IEEE has agreed that it is acceptable to include information exchange agreement material developed from Arup with some minor additional information.

Security Agreements – this was prepared by Stan Klein and commented upon by Frances Cleveland. Where possible the suggestions by Frances were retained, but the bases of this subclause are based on Stan’s work.

d. Clause 9 (Frances Cleveland)
Some significant reorganization of this material was made by the breakout participants. This included the addition of a large amount of new material. Information on this subject that is included in NERC standards was added.

The material is intended to focus on MIC security that is relevant to DR. In the presentation of this material an approach was made to indicate what can be done and what should be done.

Some of the members present noted that some text in P1547.3 would be helpful as to the level of consideration for security as relates to small, medium and large installation and other factors.

4. Plan of Action (Frank Goodman)
Final draft of the clauses is to be sent by December 23 to the P1547.3 officers. P1547.3 Draft 3 will be compiled, harmonized/edited and posted by mid-January. The P1547.3 Draft 3 document and comments will be discussed at the Jan-Feb 2006 meeting. The target is to go to ballot as soon after the meeting as practical.
Various approaches and alternatives for clause 5 were discussed. One suggestion was that if clause 5 is not completed per above schedule, then arrange a clause 5 meeting January 30, 2006 in Atlanta GA. However, then establishing and posting P1547.3 Draft 3 prior to January 31 meeting would be delayed. Other suggestions were discussed to have a clause 5 available for posting in P1547.3 Draft 3 in mid January. The final suggestion was to obtain the baseline material from clause 5 lead Paul Dolloff who worked on the clause 5 modification at the August 2005 meeting, then writing volunteers Wayne Manages, Randy West and Tom Basso would assist Paul in completing clause 5. It was further suggested to use teleconferencing to facilitate clause 5 completion by December 23, 2005.

(original detailed meeting notes by P1547.3 Vice Chair, Joe Koepfinger)