International Commission for Alpine Rescue
Avalanche Rescue Commission
Minutes of the Commission Meetings during the Conference in Pontresina on October 18 – 20, 2007

Thursday, October 18 Avalanche Rescue Commission

- Commission President Hans-Jürg Etter welcomes the participants. He thanks in advance for the preparation of the presentations to be held during the meeting of the Avalanche Rescue Commission as well as the joint meeting with the Terrestrial Rescue Commission. Hans-Jürg asks the presenters to give their PowerPoint files to Gebhard Barbisch so that he can post them on ICAR's web site. The presenters have to sign a waiver to allow the publication of the materials. Hans-Jürg makes sure that all participants have a copy of the agenda and asks for approval to conduct business in German and English only. The Commission approves. He further announces that there will be an evaluation form for this year's conference. The welcome concludes with the introduction of Dale Atkins, Vice President of the Avalanche Rescue Commission, Manuel Genswein, who will translate, and Chris Utzinger, who will provide minutes in German and English.

- The minutes of the meetings in Kranjska Gora in 2006 are approved.

- Participating member organizations receive colored voting cards representing one or two votes. Mats Hjele and Walter Wuertel serve as vote counters.

- A list of participants is circulated with the request to update/modify the information as needed. Numerous emails bounced back as undeliverable. Participants are encouraged to use the list as a tool to network among each other. A list of the participating organizations can be found in the appendix.

- Dale Atkins informs on the status of the multilingual international glossary of avalanche-related terms. The original glossary of the Vanni Eigenmann et al Foundation, to which Pavel Segula added an additional language, was converted to Word and serves as the foundation for enhancements. The revised glossary will be posted on the Internet. Dale asks participants to provide links to existing glossaries in different countries. One objective of the glossary is to provide internationally consistent terminology to be used in avalanche education.
  Dieter Stopper thinks that the term of an initial signal should be defined. He considers the initial signal to be the moment at which a digital transceiver indicates distance and direction for the first time.
  In January 2008, additional terms will be sent out for discussion/translation.

- Once again a data collection form exists to compile the avalanche accident statistics for 2006/07. Dale asks participants to enter the data from last winter. Data from previous winters can be enhanced at any time (by passing the information to Dale Atkins or Hans-Jürg Etter). The statistics will ultimately be posted on the web site. Keeping in mind that the data from some countries are still missing, Dale summarizes the winter 2006/2007 as follows: A total

of 100 fatalities were reported.

46%	Backcountry skiers	0%	on roads
21%	Off-piste skiers and snowboarders	0%	in buildings
0%	in ski areas	11%	snowmobiles
15%	alpinists	7 %	other

- Following are reports from various countries on the past winter season:

Norway
In Norway there were 3 fatalities: 1 skier and 2 snowmobilers. There was a total of 19 avalanche accidents resulting in 8 rescue missions. 6 people were caught in avalanches, 3 of which were rescued by companions. These are only the incidents that were reported to the police and mountain rescue. All accidents occurred during a cold spell in March (see A. Lunde's report in the appendix).

Austria
Most fatalities occurred in Tirol. The shallow snowpack led to the many victims. There were three distinct avalanche cycles January 5-8, February 13-18, and March 2-4. Overall 98 accidents occurred in which 198 people were caught. 47 were injured and 17 killed. Of the 198 people caught in avalanches, 91 were backcountry skiers, 67 off-piste skiers and 19 off-piste snowboarders.

Liechtenstein
On January 6 an avalanche accident occurred in Malbun that killed a backcountry skier. He was equipped with an ABS airbag and a transceiver. The airbag was deployed. The victim was spotted on the surface of the slide with the deployed airbag. The transceiver was turned off in his backpack. A secondary avalanche subsequently buried him. Based on his semi-sitting position and the fact that he was still wearing both skis lead to the assumption that he may have survived the first avalanche. He was located by a probe line in the area where both avalanches overlapped.
The weather was fair with a few clouds and a considerable avalanche danger was forecast. The snow depth at the burial site was 4m. The rescue mission, which involved 21 mountain rescuers, 10 avalanche dog teams, 2 helicopters, 33 firefighters, and 6 police officers, lasted approx. 5.5 hours until the victim was located.

Czech Republic
One skier was killed in the Czech Republic. It was determined that he triggered the avalanche himself and died of asphyxiation.

Switzerland
There were 117 avalanche accidents in Switzerland, 20 of which resulted in property damage. 203 people were caught (long-term average 124), 21 people died (long-term average 25), and 35 were injured (long-term average 20). Of the fatalities, 7 were backcountry skiers, 7 were off-piste skiers, and 7 were traveling on foot. An accident on the Jungfrau in July of this year that killed 6 mountain specialists of the Swiss Army was especially tragic

(avalanche with subsequent fall).

- Clair Israelson presents the results of the survey conducted by the avalanche prevention workgroup. The results can be viewed at http://www.zoomerang.com/web/SharedResults/SharedResultsPasswordPage.aspx?ID=L22WNVN63H6X . The password is "ikarcisa". Interested organizations can still take the survey at http://www.zoomerang.com/recipient/survey-intro.zgi?p=WEB2267X9BH9V4

- Jürg Schweizer of the SLF, CH, was asked by the commission in Kranjska Gora, 2006, to recommend a consistent method to determine the search strip width. He presents different possible methods, assess their applicability, and makes the following suggestion:

  1. The search strip width shall be determined according to the method of F. Meier based on the maximum range.
  2. How to determine the maximum range, including the mean and the standard deviation, has yet to be defined in detail. The maximum range is also necessary input for the simulation method of M. Genswein.
  3. The simulation method shall be further investigated with the objective of possibly finding a simple rule by which the search strip width can be derived from the maximal range, also including the mean and the standard deviation.

  In the discussion, Felix Meier points out that the accuracy is subject to soft factors, such as the antennas, the batteries, the temperature, and the hearing of the rescuer. With regard to soft factors, Manuel Genswein adds that considerations shouldn't always be made based exclusively on worst cases, and that the chances of survival of the buried victim (in terms of time) should also be taken into consideration.
  Jürg Schweizer and Felix Meier state that the search strip width is independent of the transmitter. The question of the relevance of the search strip width comes up, especially in difficult terrain and given the limited ability of a rescuer to estimate distances precisely.
  Hans-Jürg Etter makes a motion that the ICAR Avalanche Rescue Commission should not make a recommendation at this time. Until a final recommendation is formulated, possibly taking Manuel Genswein's proposal into consideration, the suggestion of Jürg Schweizer mentioned above shall be followed. The commission accepts the motion with 32 votes and no abstentions.

- Michael Höflinger reports on the avalanche dog handler gathering in the Leoganger Steinbergen, which took place June 7-10, 2007. Main topic of the gathering was area search in mountainous terrain. It is noted that the number of area search missions is generally increasing. At the gathering, area searches were discussed and practiced. An emphasis was put on the training of young dogs up until they become operational as well as verifying the sectors searched using GPS receivers. Future gatherings, which dog handlers of all member organizations are encouraged to participate in, will focus on cadaver search and securing dogs in difficult terrain. Axel Budde, spokesperson for the dog handlers, announces the following three objectives for the future:

  1. Dog handler gatherings shall be held every other year.

2. Heads of the K-9 programs of the member countries / organizations are especially encouraged to participate in the dog handler gatherings, but also in the ICAR conferences.
3. During the ICAR conferences, the dog handlers shall meet separately for half a day.

- The following members are recognized by Hans-Jürg Etter for their contributions to the Avalanche Rescue Commission: Francois Sivardière (F) in absentia, Reinhard Gruber (A) in absentia, and Nils Faarlund (N). Nils accepts the honor and shares a few thoughts on the importance of prevention.

- Under miscellaneous items, no further comments are made nor are any questions asked.

- Hans-Jürg Etter adjourns the official meeting of the Avalanche Rescue Commission at 1640 hours.

- Dean Cardinale, President of the Wasatch Backcountry Rescue, introduces his organization and its avalanche dog program.

Friday, October 19 Avalanche Rescue and Terrestrial Rescue Commissions

- **New National Standard for Organized Avalanche Rescue in Norway – Albert Lunde (N)**
  Albert reports on the development of a national avalanche rescue standard in Norway. The main challenges in Norway are the topography and the great distances. A national standard increases the rescue efficiency. Organizations involved include rescue dogs, the Red Cross, civil defense, the army, mountain rescue, the police, emergency medical services, ski patrol, and rescue helicopters. The resources are divided into three categories: air rescue, avalanche rescue, and other rescue services. The standard was developed by consensus.

- **The Importance of Organized Rescue - Dale Atkins (USA)**
  Dale makes a case for organized rescue. Since the mid '70s avalanche awareness educators have been focusing on the importance of companion rescue and almost ignoring organized rescue. This attitude is no longer appropriate. Thanks to increasingly rapid notification with cell phones, a greater density of rescue resources, greater mobility with helicopters, and better technology, organized rescue can contribute to a more favorable outcome in avalanche accidents. Given the fact that a fair number of backcountry avalanche accidents still occur relatively close to developed areas and that organized rescue has appropriate training and equipment to provide medical care, the importance of organized rescue must be reinforced in avalanche education.

- **Pieps – the Digital Revolution – Markus Eck (A)**
  Markus presents Pieps' avalanche transceiver technology. He gives an overview of Pieps' history including the launch of the first transceiver with three antennas and digital signal processing (DSP) in 2003. Pieps postulates that a largest possible search strip width be used

during the primary search phase and that rotating a transceiver in all three axes should be eliminated. The declaration of the digital range, and by extension of the search strip width, must be made using the worst relative antenna orientation. The range must be consistent across the entire bandwidth of 457 kHz +- 80 Hz . Increases in range would be possible if the standardized bandwidth tolerance would be reduced. Three-antenna devices are state-of-the-art. A minimum range for the Z-antenna should be included in the standard. The signal separation and marking (suppression) of signals in multiple burials are subject to physical limitations. Improvements will only be possible if the standard defines maximum bandwidth tolerances, maximum pulse durations, and minimum pulse rates.

- **Stategic Shoveling: the Next Frontier in Companion Rescue – Dale Atkins (USA)**
  Dale Atkins explains that strategic shoveling is necessary in companion rescue to save precious time and create sufficient space for patient care. The following method was established in a series of experiments in Colorado in 2006. Using this method, the probe pole is left in place to indicate the exact location and burial depth of the victim. Initially a starter hole is dug out downhill of the probe pole. It should be 1.5 times as long as the burial depth and about 1.25 m or an arms' length wide. These dimensions result in an angle of about 30 degrees from the victim to the snow surface and increase the probability of exposing the head of the victim quickly. Initially digging is performed in a kneeling position to spare the back and the snow is thrown out to the sides. Ideally, snow is cut out and removed in blocks. As soon as the hole is waist-deep, the snow is thrown downhill. At this point, digging continues at half the distance to the probe pole.

  Excavating a buried victim is the most time-consuming and most strenuous part of companion rescue. Efficient shoveling requires a strategy, physical fitness, and technique. Digging should be incorporated into companion rescue training.

- **The V-shaped Conveyor Belt for a Rapid and Gentle Excavation of an Avalanche Victim – Manuel Genswein (CH)**
  Manuel proposes a v-shaped conveyor-belt method to quickly and gently dig out a buried avalanche victim. With this method as well, the probe pole is left in place to indicate the exact location and burial depth of the victim. The hole is dug in the shape of a V pointing toward the buried victim, as his or her spatial orientation is yet unknown. In flat terrain, digging is started two burial depths downhill of the probe pole; on a slope, one burial depth down hill of the probe pole. On the downhill side, the hole should be at least one burial depth wide. These dimensions ensure that the angle of the downhill side of the hole is never more than 25 degrees. One rescuer digs in front. The remaining rescuers are staggered below at two shovel lengths' distance in the shape of a V, thus creating a central channel through which the snow is removed. The rescuers rotate positions clockwise every 4 minutes and continue digging until they make contact with the victim. Afterwards, 3 rescuers dig laterally in order to expose the head and airway as quickly as possible. Using this method, digging on one's knees and digging steps should be avoided, among other things.

- **The Opportunity for Manufacturers to Solve 100% of the Multiple Burial Scenarios – Patrick Giraudan (F)**

Patrick makes suggestions on how transceiver manufacturers could come closer to solving multiple burial situations reliably. Multiple burial situations pose challenges with regard to signal reception / separation, signal marking / suppression, and ethical issues. Each manufacturer uses different send / receive bandwidths and signal strengths. Patrick proposes a closer collaboration between manufacturers. Pulse duration and pulse rate should be standardized. The transmit bandwidth should be reduced to 457 kHz +- 20 Hz and the receive bandwidth to 457 kHz +- 80 Hz, respectively. Both should be standardized as well.

- **Next-Generation Search with Visual Display and Digital Signal Separation - Franz Kröll (D)**
  Franz introduces the Ortovox S1. This three-antenna device with digital signal processing features a new map-like visual display of avalanche burials. Buried victims are shown in their relative position to each other. They can be located individually using a crosshair and subsequently marked. The device offers additional features such as a compass and an inclinometer. Franz confirms that modern transceivers must be capable of solving multiple burial scenarios. He points out that despite the reduction of the standard transmit bandwidth to +- 80 Hz, the numerous users of devices that were compliant with the previous standard of +- 100 Hz [like the F1] should not be neglected or discriminated. Franz also opposes the "intelligent transmitter" [of Pieps]. He points out that this feature negatively affects the signal separation algorithms of all manufacturers.

- **The Avalanche Ball – the Lifesaver with the Speed of Lightning - Daniela Vernier und Herbert Fournier (A)**
  The two present a video of the avalanche ball. The system consists of a spring-loaded floatation device (ball) on a 6 m cord, which in case of an avalanche is triggered using a rip cord. In the event of a burial, the ball remains visible on the surface. The system is worn on a hip belt or in a special fanny pack and can be re-used indefinitely after easy repacking.

- **The New Life Bag from Snowpulse - Yan Berchten (CH)**
  Yan demonstrates a new avalanche airbag product, the Life Bag from SnowPulse. The Snowpulse Life Bag is triggered with a rip cord. The 150 l airbag inflates completely with air within 3 seconds. The cartridge contains compressed air and can be refilled by the user with the supplied adapter. The airbag is designed to protect the head, neck, and torso of a victim and to ensure a preferably upright burial position. Over time, the airbag shall automatically deflate thereby creating an even larger air pocket. The Life Bag is built into a backpack.

- **Signal Strength vs. Signal Timing - Dr. Thomas Lund (USA)**
  Tom reports on the results of a computer simulation to determine the probability of signal overlap with multiple burials. The pulse duration and the pulse rate of different transceiver brands served as the input for the simulation. To create statistical data on signal overlap, configurations of 24 Trackers, 24 F1s, and 24 mixed-brand devices were used. The simulations showed that signal overlaps of 10-15 minutes in over 10% of the scenarios involving four transceivers were absolutely possible, depending on the brand mix. With more than four transceivers, it is even possible to obtain indefinite signal overlap.

Tom therefore points out, that although digital signal separation and marking technologies may expedite a rescue effort under favorable conditions, these features still have limited capabilities. Using today's transceivers with digital signal separation, it can still occur that the number of signals indicated exceeds the actual number of victims, that the marking of a signal suppresses another signal thus making this victim undiscoverable, or that marked/suppressed signals suddenly show up again as new victims. Rescuers should therefore always practice and master analog search methods, such as the three-circle method or the micro-search-strip search. Some devices allow switching from digital to analog, which disables the signal separation.

The study can be viewed at http://backcountryaccess.com/english/research/documents/SignalOverlapPaper_001.pdf.

- **Rescue Operations in Mixed Avalanches/Landslides - Mats Hjelle (N)**
  Mats discusses the necessity of an improved preparation for rescue missions in combinations of avalanches and landslides. Such natural disasters are occurring more frequently with global climate change. The special challenges with these disasters include the coordination of all agencies and organizations involved, the training of all the rescuers, and the chain of command during the incident.

- **Use of GPS Receivers in K-9 Searches - Axel Budde (CH)**
  Axel talks about the practical use of GPS receivers on searches with search dogs. Exercises during the dog handler gathering as well as rescue missions in Switzerland lead Axel to the conviction that GPS receivers can provide very useful information about the coverage of a search area by a dog team, especially if the GPS receiver is attached to the dog's harness/vest instead of carried by the handler. Axel further recommends the increased use of RECCO reflectors and 457 kHz transmitters for avalanche rescue dogs.

Saturday, October 20, Avalanche Rescue and Terrestrial Rescue Commissions, in part time Medcom and Air Rescue commissions in addition

- **Local and Remote Triage Criteria in Avalanche Rescue – Manuel Genswein (CH)**
  After explaining the motivation for his presentation, Manuel talks about triage, measures to optimize avalanche rescue, sensor technology to detect vital data, MEMS: Micro-Electro-Mechanical System, as well as the field tests regarding vital data detection and their results.

  Question: What is your position on the ethical question whether people should be triaged using a chip?
  Answer: The device is still in development, but if significant advantages can be achieved in the triage, the development should be continued further and it is ethical to do so.
  Question: In reality, an Incident Commander will probably not conduct triage based on such a device?

Answer: This kind of triage is not yet established in rescue. However, physicians have defined the triage criteria, and when its use is more widespread, its advantages will become more evident.

- **Snake Bites – Jeff Boyd**
  To begin, Jeff mentions that a paper titled "Wilderness & Environmental Medicine" has been published a few weeks ago. He introduces different snake species and talks about the venomousness of these animals and its consequences, as well as about prevention and First Aid.

  Question: Do all snake bites involve envenomation?
  Answer: No, there are also so-called dry bites.

- **Basic Life Support Ventilation in Mountain Rescue – Peter Paal**
  Ventilation during Basic Life Support and how best to protect against infection. Methods and equipment are presented with their pros and cons.

  Question: Which kind of resuscitation with which equipment would you recommend?
  Answer: This question hasn't been answered in detail to date. If mouth-to-mouth, mouth-to-mask, or other methods are not possible, then at least efficient compressions should be performed. If ventilations are performed, chest rise should be observed with each ventilation.

- **The Doctor's Rucksack: What's Useful and What's Waste? - Oliver Reisten**
  A year ago, the idea came up to compare and discuss the medical packs of the different organizations and to offer the lists to organizations that are in the process of assembling their packs.

- **Case report: Full Recovery of an Avalanche Victim with Severe Hypothermia – Hermann Brugger**
  Using an impressive case study, it was made clear that a severely hypothermic avalanche victim with ventricular fibrillation and the presence of an air pocket should not be pronounced dead before he or she is connected to a heart-lung machine (cardiopulmonary bypass pump).
  A second case, a rockslide in the Dolomites, which occurred just a few days back, reminds us that all rescuers must be secured to the extent possible under the circumstances. Near misses provide food for thought.

An evaluation form for the ICAR Conference is handed out. Each organization is asked to return a completed form.

- **Multiple Burial Study - Dieter Stopper**
  Analyzing a series of avalanche incidents, Dieter studied how many people were fully or partially buried and how often a transceiver was actually needed to locate the victims. He notes that eye witness information given on scene by rescuers often doesn't match the information captured in the accident reports. In conclusion, he suggests that this is another reason why rescuers should focus more on shoveling and shoveling strategies.

Question: We have heard presentations that describe the problems over signal overlap in multiple burials. Why this contradiction?
Answer: It is not a contraction. These are two different possible situations.
Question: Why is a new ultra light shovel, which is not suitable for rescue work, being exhibited and promoted here at the ICAR Conference?
Answer: I am not a shovel expert; maybe a study on shovels would be appropriate.
Question: Were the rescuers in these examples trained rescuers?
Answer: Some yes, others not.

- **Decision Making and Risk/Benefit Analyses in Avalanche Rescue Operations? - Krister Kristensen**
  He points out that no rescue mission should be carried out without first determining the risk for rescuers, whether this is done using checklists or other procedures. They have tried to develop a risk/benefit analysis formula in a workgroup, but have not completed the work yet.

  Question: How do you foresee practical decisions being made for the alpine world from a paper-laden desk?
  Answer: This fact will be inevitable in the future and should be optimized as far as possible. Management increasingly often asks for justifications, and the fact is that too many rescuers have lost their lives to date.

Toni Grab welcomes the honorary member Dr. Flora and seine Frau who have kindly decided to stop by and visit. Colonel Franz Nager, Commander of the Mountain Troop Competence Center of the Swiss Army is also welcomed.

- **ICAR Web site - Gebhard Barbisch**
  Gebhard presents new features of and modifications to the IKAR web site. A new forum platform is being provided for internal use only in order to prevent abuse for commercial purposes. The search function can also be used to search this web site. Newsletters will be emailed in the future, which requires that all the email addresses be up-to-date. Subscriptions for the newsletters can be obtained through the commission presidents. The organizations are not only requested to subscribe new delegates, but also to unsubscribe retiring delegates to avoid extensive distribution lists with obsolete recipients, which complicate management.

Saturday, October 20 Reports from all Commissions

- **ICAR President: Toni Grab**
  The recommendations developed over the past years are intended to „keep tabs on things“. Thanks to everyone who contributed, especially Felix Meier. Toni attended the dog handler gathering in June. Dog handlers participating in the ICAR Conference would like to have a half day at their disposal in the future. Every other year, there will be a separate dog handler gathering, because this would exceed the scope of the ICAR Conference. This motion is voted on later.
  Visit in Tirol in July.

Two Board meetings during the past year.
Secretary position is vacant. A replacement is being sought-after.
Presentations for future years including an abstract must be submitted in writing by August 31. Additional proposals will no longer be accepted.
Practical pre-conference sessions are also discussed, alternating every year between the Terrestrial Rescue Commission and the Avalanche Rescue Commission. This motion is voted on later. Optional program changes include leaving Thursday and Friday to the commissions and using Saturday for a joint session with all four commissions.

- **Medical Commission – Hermann Brugger**

Herman thanks Toni for his leadership as President and thanks all the commission members for their good work.
He reports about the work strategy of the Medical Commission and its objective to provide patients with the best possible care as quickly as possible. Results of the collaboration are published in peer-reviewed journals and on the ICAR web site.
The workshop in Patterdale UK in combination with the international conference of mountain physicians was a full success. A world congress of mountain physicians took place in Scotland with the participation of other worldwide organizations.

Future work topics:

- Ideal ventilation device
- Snake bites
- Recommendations for crevasse accidents
- Eye injuries
- Volume resuscitation with major trauma
- Training
-

Since last year, there is an International Diploma for Mountain Emergency Medicine. To date two people have received this diploma.
The DVD Time is Life sales are successful and will hopefully remain so in the future.

- **Avalanche Rescue Commission – Hans-Jürg Etter**

Hans-Jürg Etter is proud that 55 delegates attend this year's Avalanche Rescue Commission conference. He states that the practical pre-conference session was a full success and that in the future, it will be held alternating with the Terrestrial Rescue Commission, if enough new topics or techniques are available.
Main topics we work on:

- Development of a multi-lingual international glossary. 1800 terms have already been translated into five languages and will be available later on the Internet. At least eight more languages shall be added.
  The glossary should not only offer translations, but should give definitions of special terms too, so that the understanding is the same in different languages. That's important especially for international trainings.
  Links to other glossaries from related topics should complement that work.

- Discussion of the search strip width of transceivers. No recommendation is established at this time but work continues.
- Prevention as main topic; promising contributions are already in the works.
- Data collections: Avalanche accident data are still being collected. The data haven't been analyzed yet, but the data will be available shortly on the Internet.

Interesting topics were covered this year as well on the joint meeting with the Terrestrial Rescue Commission. For example: National Standard for Organized Avalanche Rescue in Norway, Risk Management in Avalanche Rescue, interesting shoveling techniques to dig out victims and different aspects about signal techniques by the beacons work. Thanks to all the contributors in the commission and at the meeting.

- **Terrestrial Rescue Commission – Bruno Jelk**
  It is too bad that there is not more know-how transfer between organizations and countries. Bruno is seeking feedback to gain an overview. He considers the practical pre-conference to have been a full success. He points out that it may sometimes be dangerous to mix new products (ropes) with existing equipment and systems. Thanks to all the organizers of the practical session on the Corvatsch.
  The presentations were very interesting. In the future, they should be more in line with the main topic and will only be accepted with an abstract. This is also important for the translators. Cordial thanks go to these women. Proposal for a main topic: Integration of mountain rescue in catastrophes. How does this look in the different countries? Thanks to all the organizers of the conference, to Nathalie Werlen for taking the minutes, and to Gebhard Barbisch as Vice President.

- **Air Rescue Commission - Gilbert Habringer**
  Topics covered:
  - Night vision goggles
  - Presentations on accident reports; the flight accident rate is decreasing significantly.
  - The Bavarian Bergwacht has a flight simulator for mountain rescuers.
  - Special method to locate avalanche victims from the helicopter; still being improved

  Main topic for next year:
  - Human factors that can lead to accidents
  - Crew Resource Management: Collaboration of crew members
  - Vibration – technical problem that can only be solved by the pilot.

  The commission's decision on the succession: Patrick Fauchère will be nominated for President at the 2008 conference.

- The Italian colleagues present a new training book containing mostly pictures regarding safety in mountain rescue. Each organization will receive a copy along with the voting card for the Delegate Assembly.

- The conference is adjourned by the President at 1535 hours.

- In addition to the links provide for additional information, most presentations will also be made available in the ICAR web site at www.ikar-cisa.org.

Pontresina, October 20, 2007

Hans-Jürg Etter, President
Dale Atkins, Vice President
Nathalie Werlen (Sat)
Chris Utzinger, for the minutes (Thu, Fri)

Appendix

List of Participants in the Avalanche Rescue Commission 2007 in Pontresina, CH

Participant, Organization, Country
Julia Schmidecker, ABS Peter Aschauer GmbH, DE
Stefano Pivot, AINEVA, IT
Markus Wey, Alpine Rettung Schweiz, CH
Frédéric Jarry, ANENA, FR
Albert Dietrich, Ascom Schweiz AG, CH
Erwin Meister, Ascom Schweiz AG, CH
Thomas Dr. Lund, Backcountry Access Inc., US
Bruce Edgerly, Backcountry Access Inc., US
Dieter Stopper, Backcountry Access Inc., DE
Siegried Salzburger, Bergrettungsdienst im AVS, IT
Heini Malue, Bergwacht Bayern, DE
Hannes Rädler, Bergwacht Bayern, DE
Stefan Strecker, Bergwacht Bayern, DE
Bernd Zehetleitner, Bergwacht Bayern, DE
Ernesto Bassetti, CAI-Servizio Valanghe Italiano, IT
Alessandro Sterpini, CAI-Servizio Valanghe Italiano, IT
Clair Israelson, Canadian Avalanche Association, CA
Kent Herrström, CIFRO Sweden, SE
Maurizio Lutzenberger, CN.S.A.S., IT
Régis Lavergne, CNISAG Chamonix, FR
Bob Sayer, CSGA, CA
Willy Zurkirch, Girsberger Elekronik AG, CH
Jan Andrzej Brzezinski, GOPR, PL
Igor Potocnik, Gorska Resevalna Zveza Slovenije, SI
Jiri Brozek, Horska Sluzba Ceske Rebubliky, CZ
Ivo Dolezal, Horska Sluzba Ceske Rebubliky, CZ
Adolf Kleps, Horska Sluzba Ceske Rebubliky, CZ
Pavol Ferencik , Horskà sluzba na Slovensku, SK
Martin Matusek, Horska zachranna sluzba, SK
Jan Peto, Horska zachranna sluzba, SK
Audur Elva Kjartansdottir, ICE-SAR, IS
Hans Jürg Etter, IKAR Vorstand, CH
Hans Martin Henny, KompZen Geb D A, CH
Christophe Berclaz, KWRO, CH
Vincet Favre, KWRO, CH
Peter Schwitter, KWRO, CH
Peter Lampert, Liechtensteinische Bergrettung, LI
Dale Atkins, Mountain Rescue Association USA/RECCO , US
Chris Utzinger, Mountain Rescue Association USA, US
Blyth Wright, Mountain Rescue Committee of Scotland, UK
Patrick Giraudon, Nic-Impex, FR

Rachel Mugnier, Nic-Impex, FR
Krister Kristensen, Norwegian Geotechnical Inst., NO
Nils Faarlund, Norwegian Red Cross, NO
Mats Hjelle, Norwegian Red Cross, NO
Albert Lunde, Norwegian Red Cross, NO
Michael Höflinger, OEBRD, AT
Walter Wuertl, OEBRD, AT
Alexandre Jacquod, Ortovox, CH
Franz Kröll, Ortovox, DE
Christian Schneidermeier, Ortovox, DE
Jon R. Bezzola, Parks Canada/CMH, CA
Magnus Granhed, RECCO, SE
Didiei Tichadou, RECCO, SE
Anders Eriksson, Swedish Police Mountain Rescou, SE
Rickard Svedjesten, Swedish Police Mountain Rescou, SE
Jan Krzystof, TOPR, PL
Lestaw Riemen, TOPR, PL
Dean Cardinale, Wasatch Backcountry Rescue, US
Peter Schory, Wasatch Backcountry Rescue, US
Manuel Genswein, x, CH
Pascal Strappazzon, Groupe Montagne Sapeurs Pompiers, FR
Markus Eck, PIEPS GmbH, AT
Michael Schober, PIEPS GmbH, AT
Yan Berchten, Snowpulse SA, CH
Georges Ducel, Snowpulse SA, CH