

Minutes of the

CIA Special Tracking Working Group

2005 (proposed) Composition:

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Items:

- New technology – details documented in supplementary Chapter 10 of Tracking Report
- Additional scope of usage of a Live Tracking System at the Gordon Bennett 2004
- Report on events and operational matters with GPS LOGGERS during 2004
- Update of the handling guidelines and cooperation with other WG
- Future use and future ideas for the use of Loggers/Trackers
- Motions from the Special Working Group

New technology combination of a Live Tracking system:**Murau Balloon Trophy live panoramas**

A new technology combination based on SMS communication for the live position updates was tested at an Austrian alpine winter event. The SPOAT system is developed by private

companies and the cartography department of the Technical University of Vienna. With the combined expertise, the visualisation part of the SPOAT service comes finally to a level that was wanted for years. The pictures show

what was available during the event, like the 3 dimensional view based on satellite pictures. The web page allowed selecting a competitor from the list. The participant's balloon and personal detail information like the picture of the balloon (sponsor!) and the pilot's data and picture was displayed.

The SPOAT organisation plans to provide this system as a full rental service, without the organisers needing to set up any web server or other technical infrastructure. Estimated target price to be from 100-200 EUR per unit per event. For further information please go to www.spoat.org

The screenshot shows the SPOAT web interface. At the top, there are navigation buttons: 'Zoom In', 'Zoom Out', 'Fit', 'Fit to Balloons', 'Fit to Selected', and 'Show 3D View'. The main area is a map of a mountainous region with a red balloon icon indicating a competitor's position. Below the map is a list of competitors:

	020 Österr. Aero-Club
	021 Tiroler Tageszeitung
	022 Terra Gas
	023 A & M

Below the list is a 'Legend' section with icons for Borders, Municipalities, Rivers, Cities, Streets, Satellite Image, Balloons, Car, Camera, and Zeppelin. To the right is an 'Information' section for the selected competitor:

	Name: Tiroler Tageszeitung		Description: Messung: DE-ZDF Land: Österreich Besatzung: Wolfgang Nairz
	Status: Monitoring		
	StartID: 21		
	Height: 3246 m		
	Loc/Lat: 14.1395 / 46.9600 degree		
	Speed: 77.026 knot		

At the bottom right, there is a small image of several colorful balloons with numbers on them, including one with the number 19.

Additional scope of usage of a Live Tracking System at the Gordon Bennett 2004:

The INMARSAT satellite communication based Live Tracking system with the DMR200 on-board units – in use at the Gordon Bennett 2004 flying out of Thionville, France – provided (unplanned) assistance for the pan-European ATC operations.

When some transponders stopped to work during the flight, the ATC controller from the competition headquarter (Jens Merzak) used the Live Tracking System on the organiser's website to coordinate the balloons positions with the other ATC controllers en route. The Air Traffic Controllers of the Baltic States and Sweden could "see" the balloons approaching on the website, even if they could not "see" the balloon positions on the radar screen. The GPS LIVE TRACKING system was an unofficial, but very effective aide to standard ATC procedures; it helped to safely guide the balloons through European airspace.

[Out of scope] Remark: This is not meant to encourage stealth flying or violating ATC procedures in controlled airspace, in fact the "happenings" of this year could harm future free flights across European airspace. All pilots are reminded to follow ATC / ICAO procedures within controlled airspace to allow future balloon flights.

Report on events and operational matters with Loggers during 2004

Logger implementation and usage in nearly all events that were run in 2004 relied on people that gained their experience and knowledge by participating in a number of events in the previous years. By this, they were showing newly interested organisers how to handle GPS LOGGING and GPS TRACKING operations at the competitions in a simple and effective way.

There were only few negative examples of organisers not willing to accept the gained experience and advices and therefore making competition procedures unnecessarily complicated and inefficient. This was especially the case at the Worlds 2004 (Mildura). To avoid another down-under mess, the Special Tracking WG recommends strongly to organisers to take advice, not only from the available guides, but also from helpful and experienced officials, in or outside CIA.

Update of the handling Guidelines and cooperation with other WG within the CIA

The "Guidelines for the Use of GPS LOGGERS in Ballooning Competition" published last year need to be updated. The Scoring WG, concerned about some parts of the guide, asked to join forces, ideas and reports to end up with a single combined guide. That guide – accepted by all parties of the CIA – may become a part of the Competition Operating Handbook (COH).

The Special Tracking WG is happy to update the Guide together with any concerned Working Groups. This will be one of the Tracking WG major actions for 2005.

A general need for experience and knowledge recording lead to a discussion about a history document on how loggers have been used at all kind of events around the world. This experience is an absolute help to new organisers that decide to have LOGGER assisted competitions. This document doesn't necessarily be part of the above mentioned guide, but it should have a part with FAQ and very practical hints on how to organise and run a logger competition.

Another need is a simple and easy readable list (table format) with specifications of the different GPS TRACKING and GPS LOGGING solutions available today. The comparison of features, technical specifications and costs will assist organisers in choosing an appropriate solution. Some short reviews, evaluations and comments will be added. As a large number of different devices are already operated, this list will be established in 2005 and published as soon as possible.

Future use and future ideas for the use of Loggers/Trackers

With GPS TRACKERS and GPS LOGGERS new competition ideas are rising. A new possible competition is a “World Online Championship” or “eTasks”.

For a pilot a major aspect is being able to compare the personal performance directly with that of other pilots, something that until recently was only possible with centrally organized competitions meeting at one place for some days. But the technology of the Internet is now changing that. A new format allows pilots to compete both locally and internationally, and to see the results of their efforts within a few hours on a website. Choosing their own task, anytime between January and December and still test their skills against those of pilots from all over the world will make it a global competition with the flare of a world championship, but without that expensive trip to a common site and the need to be there at the same time.

Different competitions, challenges, trophies and tasks can encourage all kind of pilots, from competition novices trying out what competition is about, to world champions confirming their skills in a high level competition. FAI-CIA recognition of the achievements at any level will create an online community of pilots sharing experiences, knowledge and good moments.

The concept has already been realised by the FAI-IGC (International Gliding Commission) with the Online Contest (OLC). Independently from existing competitions, the Special Tracking WG will study all possibilities in 2005 and come up with a possible ballooning specific concept and realisation for the future.

The Special Tracking Working Group's upcoming years:

The Special Tracking Working Group requests an extension of its lifespan, as expertise is needed and, especially in this field, the changing technology needs updated reports and investigations. New ideas of competitions (based on the use of TRACKERS and LOGGERS) came up and need further analysis of feasibility and planning.

The Tracking Working Group will join forces with other Working Groups to compile and write a more detailed guide on how officials and pilots should use GPS TRACKERS and GPS LOGGERS at competitions, covering scoring and handling procedures.

The Tracking Working Group will offer its expertise as a service to the ballooning community.

Motions / Recommendation

Motion: The Special Tracking Working Group requests an extension of its lifespan with the name changed to “**Tracking WG**” of the CIA for the reasons mentioned in the report and minutes.

Recommendation: The Tracking Working Group will continually update the “Guidelines for the Use of GPS Loggers in Ballooning Competition”. This document is a current summary of the knowledge and experience in the field of GPS LOGGING and GPS TRACKING. The Tracking Working Group encourages the reading and use of the described procedures especially for organisers, since some of the pitfalls can be avoided by learning from earlier experience.

The Tracking WG is open to further input and operational experience reports from usage of GPS LOGGING and GPS TRACKING worldwide.