

SPEED SKATING



INTEGRATED SOLUTION

...services from one source

Timing and competition management

Our classical timing system is based on light beams using a multi-channel timer. In connection with the timing and result software, it is possible to handle complete Speed Skating competitions at ease. An optional transponder-based Timing system is perfectly suitable for demanding disciplines such as Team Pursuit and Mass Start.

The software works on any standard MS Windows PC with LAN connection. It is not only designed to manage competition data but also athletes, officials as well as real time and offline outputs.

The software consists of 2 components: Timing and Competition Management. The Timing application receives timing data, calculates the results and distributes them online to TV, scoreboards, internet or commentator information systems. The competition management software administers athletes data, creates start lists and distributes them offline.

Timing software

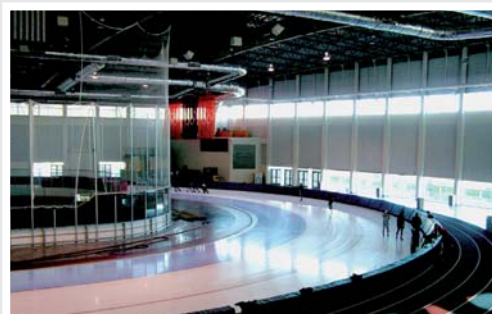
- Review of start lists, monitoring of data entry and results
- Data entry during the race (start signal, passing times)
- Possibility to manually edit data in case of missing input or corrections
- Calculation of lap, gap and total times
- Results calculation (standings, ranking, cup rankings)
- Provision of timing data and results in real time to any media



Light beam



Pregames Torino 2005



Salt Lake City

Result Manager

- Management of event data (season, name, venue, track, start data, finish date)
- Management of schedule data (start and finish time of each discipline)
- Management of athletes, teams and officials data (names, country, club, etc.)
- Management of different formats for TV, print names or scoreboard names
- Production of start lists and printed reports
- Weather data handling (ice & air temperature and humidity)
- Management of results confirmation process (incl. selection of disqualification reasons)
- Insert of event and sponsor logos

Timer system

- Modular timer system with up to 16 impulse channels
- PC interface
- 2 signal-processing units for photoelectric beams
- Thermal printer
- 19" casing

Set of light beams

- 2 reflecting laser light beams for inner and outer lane
- Housing with spikes and mechanical adjustment system to adjust the light beam position (horizontal and vertical direction)
- Double reflector
- Protection covers
- Laser light 2-3 cm above the ice surface

Lap counter

- Triple-sided
- LED 7 segment display for up to 199 laps, 30 cm digits
- Hand-held console and tripod
- Optional: bell

Lap time board

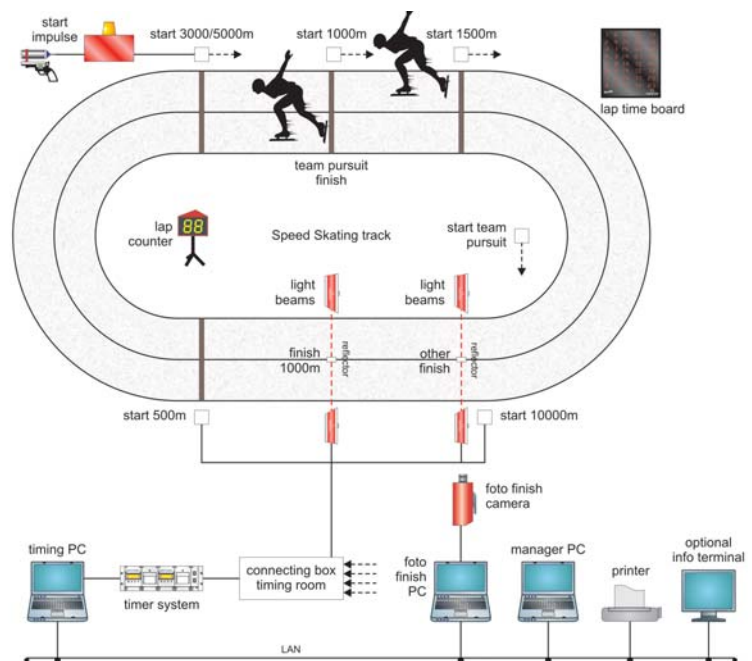
- Numerical display with 7-segment amber LED 24 cm digits
- Suitable for indoor and outdoor use
- Different boards with 1 line available (6 or 9 digits)

Options

- Integration of transponder timing system

Additional services

- Interface to TV graphics, Commentator Information System, live Internet and public scoreboards



System overview

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SPEED SKATING

TRAINING ANALYSIS

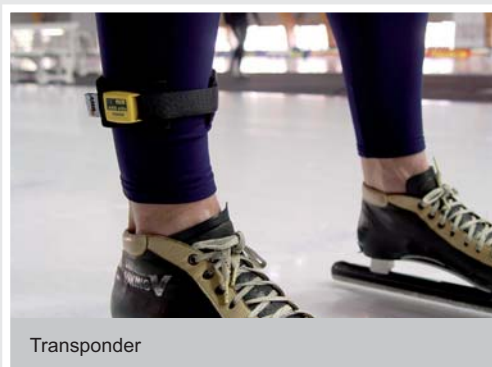
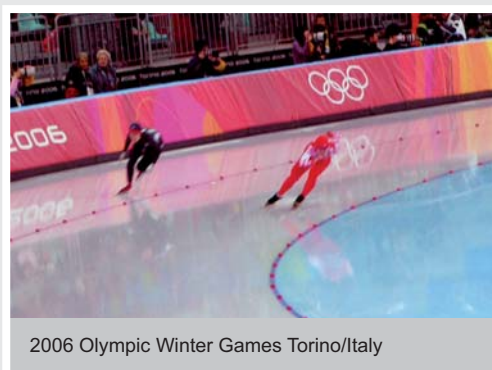
Transponder timing and heart rate measurement

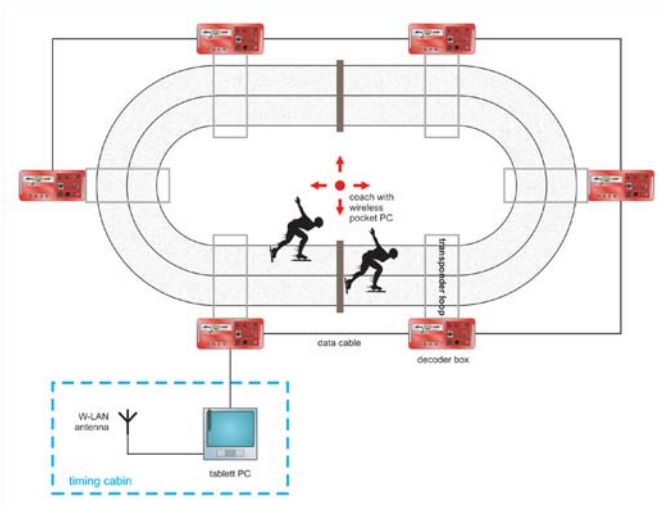
How it works

Our analysis system is based on transponder timing. It is used to gather and display timing data of Skaters on a Handheld PC (PDA). In addition to the lap time, timing data of curve entry, middle and end of the curve can be measured, if additional measurement points (loops) are installed. Sector times of individual laps can now be compared to each other, making further data available to coaches and Skaters for immediate analysis. If the system features an optional heart rate measurement system, heart rate data are available on the PDA in real time.

Besides a resolution of 1/100sec, the ST SPORTSERVICE transponder timing system features another considerable advantage for Speed Skating timing process. New disciplines including Team Pursuit and Mass starts are very demanding with regard to the common light-beam timing technology, as timing data are hard to be uniquely assigned to a certain Skater. Using a unique transponder ID, timing data can now be assigned to just one Skater.

In addition, the PDA can display timing data of more than just one athlete at the same time. This feature allows the coach to check all timing data of the entire training group – mobile, online and almost in real time. Data can also be sent to the Internet making it possible to check training data worldwide and at any time.





In order to gather heart rate data, the Skater needs to wear a heart rate measurement belt. The system has a radius of up to 150m. Antennas installed in the oval ensure that training data are available within the entire training area.



Up to 9 transponder loops can be installed in the oval. Skaters wear transponder on the left and right ankles. These transponders are tracked once the athletes cross a loop. A decoder identifies the transponder ID and sends it to the PC. Depending on the individual system settings, the PC now processes timing data and sends them to the coaches' PDA using a wireless network. Offering maximum flexibility to the coach anywhere in the oval, the PDA now displays timing data of each individual Skater.

Speed skating track

Pocket Coach Manager

Hardware



PDA for the coaches to get the data from the skater

- MS Windows based notebook or PC
- MS Windows based handheld computer with WLAN interface (PDA)
- WLAN access point incl. antenna
- Periphery devices to connect transponder decoder
- Transponder (neoprene strap, 16g, 120.000 passings)
- Transponder decoder
- Detection loop (wired loop 3mm below the ice surface)

- Online gathering of up to 9 sector times
- Gathering of lap times (cumulative)
- Export of gathered data
- Wireless data transmission to the PDA
- Simultaneous use of several PDAs
- Real time display of sector and lap times of up to 4 skaters
- Interface to an internet application
- optional: real time display of heart rate data

Options

- Heart rate measuring system incl. heart rate receiver and heart rate belts

References

- 2007 - Calgary, Canada, Olympic Oval

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