

Protect your Skis with your Phone!

Near Field Communication¹ (NFC) is mostly associated with micro payment systems or access solutions. These are the ideal use cases for rather slow, but contactless information transmission over distances of up to some centimeters.

Theft Deterrent System for Skis (TDS-S) is a novel approach to using NFC technology – it protects your skis from being stolen.



The students Markus Eder, Florian Lettner and Carina Madlmayr from the Mobile Computing department of the FH Hagenberg² are fond of skiing – rather natural, considering they’re from Austria. Everyone who has already been on a slope in his life will know the slightly worrying thoughts when you go into a ski hut: “Are my skis still going to be here when I return?”

Especially if you know that there are more than 10,000 registered ski thefts every year only in Austria, it’s certainly not inappropriate to think about securing your expensive skiing equipment. Naturally, cameras outside of the restaurants usually don’t help much. If you consider what everyone is usually wearing when skiing, you’ll usually have a hard time to identify the thief should the police ever catch him. The only commercial solution that’s available today is to the skis together using a lock (like the simple bike locks). Unfortunately, this isn’t the most comfortable solution.

Near Field Communication is here to help



Surprisingly, NFC is the technology that proves to be incredibly useful to prevent ski theft, while still offering all the comfort you might want to have. The project *Theft Deterrent System for Skis*³ (TDS-S) is essentially about pairing the boot with the ski and doesn’t let the thief step into the binding if the secure code doesn’t match.

This is done by putting an MIFARE-tag into the boot. A small RFID-module is inserted into the ski and connected to one of the new bindings that electronically control the operation of the binding – like the *Atomic Neox EBM*⁴. A Near Field Communication-enabled mobile phone or a PC is able to pair the boot with the ski. If anything else than the trusted boot steps into the binding, it refuses fastening and doesn’t let the thief drive away with your skis.

The project is currently still in development - you can read more about it at symbianresources.com⁵ or the project homepage⁶. The first prototype has already been published and managed to be among the winners

¹ http://en.wikipedia.org/wiki/Near_Field_Communication

² <http://www.fh-ooe.at/mc>

³ <http://www.symbianresources.com/projects/skiantitheft.php>

⁴ <http://www.ski-review.com/content/view/28/34/>

⁵ <http://www.symbianresources.com/projects/skiantitheft.php>

⁶ <http://www.protectyourskis.com/>

of several global competitions – the 1st Austrian NFC Developer Competition as well as the NFC Forum Global Competition. Who knows how much longer it'll take until skis, which started out as simple wooden planks⁷ (The word “ski” meant “a stick of wood” in Old Norse) will finally turn into a product full of high tech.

NFC Congress

By the way, if you're interested in NFC, the place to go is the third annual NFC Congress⁸ from the 24th - 26th of February, 2009. It'll take place again in Hagenberg. After the successful previous two events, it has now turned even bigger and now consists of the conference, a workshop, an exhibition, a competition and even an IEEE scientific workshop day. Register now!

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⁷ http://en.wikipedia.org/wiki/History_of_skiing

⁸ <http://www.nfc-research.at/index?id=69>

