

# Tony back on the street

Do you remember the good old times, when the kids were out on the streets terrorizing the town with their skateboards? It seems they all have swapped their boards with couches and video consoles, skating virtually now. Sure, this is cool, but we want the kids back on the streets. So what about skating on a real board while listening to cool tunes and getting points for your kickflip or 360? We will pimp your deck with an N900, so you can enjoy the advantages of modern skating video games in your favourite halfpipe.

So how will it work? Of course, it's a bit scary to have such a wonderful device like the N900 being mounted directly on the rough back of a skateboard. The stuntman for our N900 will be a brave Arduino micro-controller which is glued to the bottom of our shiny board. It's connected to sensors observing the moves and transmits them via Bluetooth to the N900, which is safe and warm in the skater's pocket.

## The Game

The rules are quite simple: Skate well and you will listen to the freshest punk, hip-hop and electro tracks. Skate shitty and you will end up with country classics.

For performed tricks you gain points and they are announced through the speaker. When you finish skating you get statistics and you are able to share your highscore online or sync them with your friends' devices. If you perform a really awesome move, it will be posted immediately to Twitter or Facebook.

## Gameplay

**Freestyle:** You skate as long as you like and finish your ride manually. The music changes depending on your skating style.

**Time-Trial:** You have five minutes to perform cool tricks and earn points as much as you can.

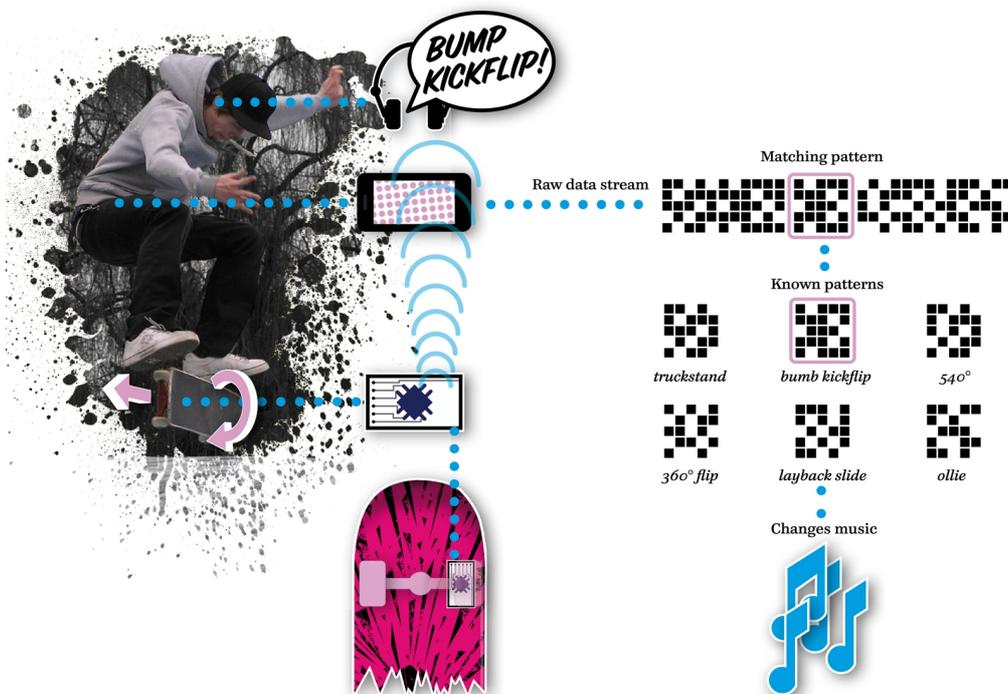
**Competition:** You connect your N900 with a friend's one. Both of you skate and score points for your tricks. The rank of each player will be reported anytime the status changes.

## Technical details

The idea is to mount a securely cased Arduino to the bottom of the board adjacent to the trucks (see figure on next side). A three-axis accelerometer, a gyroscope, and a Bluetooth module are wired to the micro-controller. The data produced by the sensors will be transmitted to the N900 via Bluetooth. The raw data are then interpreted by a software running on the Maemo device. The program has stored a set of known trick patterns and compares them with the incoming sensor data. When it recognizes a trick it will play a bunch of samples, like "Bump Kickflip; 50 points; Awesome!".

The software will be able to communicate via XMPP to other devices and share high-scores and provide competitions. We plan to implement the XMPP communication with Telepathy, so available Jabber or GTalk accounts can be used. For the same reason we will implement Mircofeed for Twitter and Facebook .

We will use standard sensors and parts and will document everything well, so any interested skater or hacker can built his own pimped skateboard and enjoy the competition.



## The Team – Solderin' Skaters

### Jan Anlauff (programming, microelectronics)

A computer science student and member of the Ambient Intelligence group at the Bielefeld University. Just finished his thesis on “Tactile Sensing”. He worked a lot with Arduinos for his thesis.

### Florian Fusco (artwork)

Florian studies textile and surface design in Berlin Weissensee. He is working in transdisciplinary projects between art and design. His latest works include paper sculptures, insect-patterns, tshirt layouts for graniph.com and a skateboard.

### Nick Thomas (programming, sound design)

He is a passionate DJ and computer science student in Bielefeld. As a member of the sociable agents group he is working on artificial intelligence and distributed systems. Learned skating with Erik in the world’s biggest skatepark in Shanghai.

### Keywan Tonekaboni (concept, programming)

A communication and media science student interested in new experimental user interfaces. Keywan is a fan of Maemo since the first days when he bought a 770 in 2006. Due to his lack in motoric skills he is afraid of skating on the street, but loves Tony Hawk Pro Skater.

### Erik Weitnauer (programming, physics expert)

He studies computer science as well and just graduated about physic engines and robots. He fell in love with skating in China and China itself, too. He is a proud owner of an N810 and is looking forward to work with Maemo 5.

### Lennart Wrede (skating, testing, model)

He skates on a regular basis since 14 years but was never interested in skating contests, Which didn't stop him to skate in sponsored underwear. He prefers exploring new local skate spots in the original district of Neukölln in Berlin.

