



Story

Busy-scheduled commuters rarely find the time to respond to personal emails. They text and text, but a nice long, meaningful email simply can't be written on a keypad, or even a Blackberry while moving about town. However, time spent waiting for a bus, or sitting on a train can be the perfect time to fashion a response to the friend who's not heard from you in a while. All this time spent sitting around waiting, or in transit, gives commuters a natural surface to type two-handed on their lap, but a laptop is seldom appropriate during a commute. Enter the *telescarf*. By integrating soft-touch buttons into a pair of pants that snap to a bluetooth-enabled belt-buckle, users can comfortably enter long responses into their mobile devices. The *telescarf* help wearers by using the time they may not necessarily be connected (i.e. on the subway) to stay in touch.

User Scenario

The *telescarf* specifically target single, middle-class 18-34 year old Brooklynites who commute into the city on a daily basis. They pride themselves on the strength of their social and professional network, and desire to maintain, as well as increase the number of people they keep up with regularly both personally and professionally.

Field Research

In 2003, workers in New York City travelled an average of 38.3 minutes to work, while 5.6% of New Yorkers commuted 90+ minutes.¹ As of last year, there are roughly 220 Million cell-phone subscribers in the US², and Bluetooth support for these devices is increasing rapidly.³

Precedents

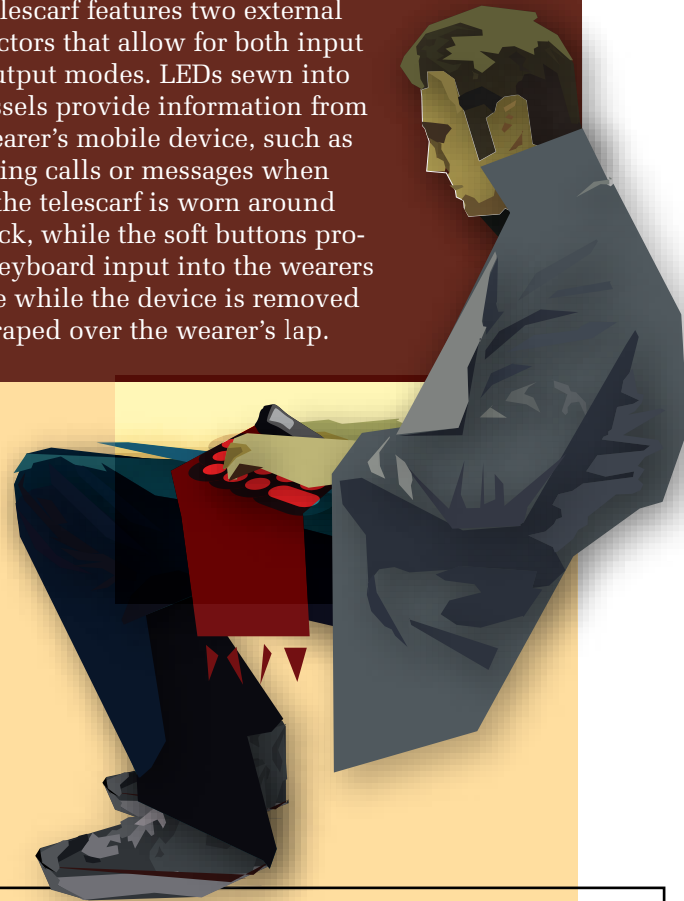
BURTON AMP JACKET: Uses soft, weather-proof buttons integrated into GORE-TEX material. Removable electronics connect to iPod dock connector. The telescarf electronics will connect using a similar small-form factor ribbon-cable connection to a parallel-in-serial-out or multiplexer chip, which can then be snapped to the powered microcontroller inside the belt buckle, which will then wirelessly communicate with the mobile device.

MOBIS ROKY2 BLUETOOTH KEYBOARD: A miniature, flexible keyboard folds up to become a soft case for a PDA device. A device like this may be reverse-engineered if a suitable Bluetooth keyboard driver chip cannot be prototyped from available online resources.

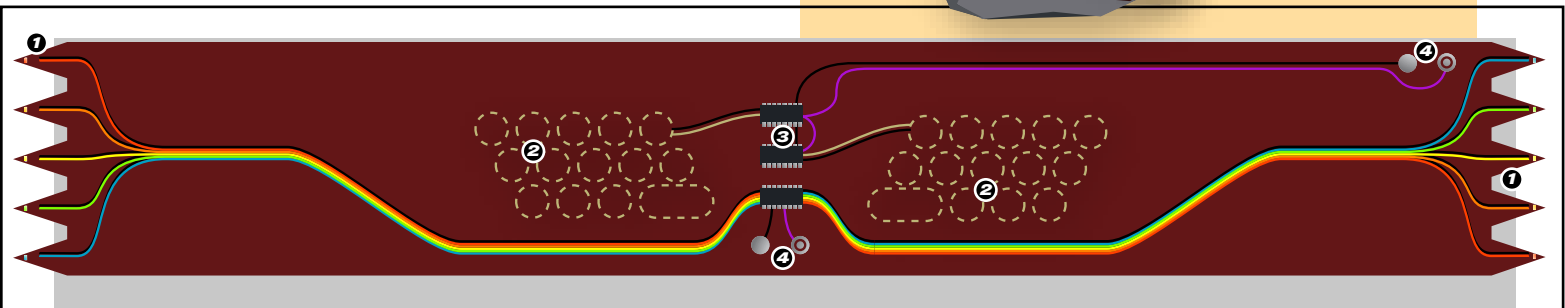
YBOX: Internet-enabled widget device connects to a television to deliver stock quotes, weather, etc. Electronics contained within an Altoids tin. This is the approximate level of miniaturization necessary to integrate the telescarf electronics into a belt-buckle.

Modes

The telescarf features two external connectors that allow for both input and output modes. LEDs sewn into the tassels provide information from the wearer's mobile device, such as incoming calls or messages when worn the telescarf is worn around the neck, while the soft buttons provide keyboard input into the wearers mobile while the device is removed and draped over the wearer's lap.



1. U.S. Census Bureau, *2003 American Community Survey*
2. U.S. Census Bureau, *"Extreme" Commute Rankings, 2003 American Community Survey*
3. Federal Communications Commission, *Trends in Telephone Service: Industry Analysis and Technology Division Wireline Competition Bureau*. February 2007
4. source: IMS, via Electronicstalk.com, *Strong growth in Bluetooth fuels CSR*. 23 Feb 2007 (<http://www.electronicstalk.com/news/cam/cam266.html>)



Schematic

1. **SURFACE MOUNT LEDs** sewn into the tassels of the scarf can provide user-programmable feedback to the wearer, informing them of incoming calls or waiting messages.
2. **SOFT BUTTON TECHNOLOGY** will allow the wearer to use the scarf as a keyboard interface to their connected mobile devices, by way of a wireless bluetooth technology.

3. **PARRALLEL-IN, SERIAL OUT CHIPS** will compress the binary data coming in and out of the telescarf's interfaces into serial data that can be sent over a one-wire connection to a wireless transmitter device.
4. **SNAPS** will provide the necessary durable connections to other garments, or standalone cells containing Bluetooth transmission hardware.