This course explores the unique opportunities and qualities available to technology-based design when it is placed in the hands and ears of pedestrians, drivers, aviators, tourists, and other mobile agents.

From *The Hitchhiker’s Guide to the Galaxy*’s proposition of a handheld, crowd-sourced encyclopedia/travel guide, to Paul Virilio’s early observation that the Walkman granted pedestrians the syncretic construction of their own outdoor realities “in kit form,” to the 25 billion iPhone applications that have now been downloaded... from “glass cockpit” avionics and GPS systems to handheld museum guides and even Google’s “Project Glass”... graphic designers can now radically shift the interface between people and the environments they explore, and designers commonly do use technology to augment real-world environments in complex ways.

But how should we? When can these new technologies improve or heighten our relationships with our environments, and when do they simply monetize the contexts around us and isolate us from one another? With reference to avant gardes that have contributed to and predicted today’s state of the art, this class asks students to design their own concrete applications for iPhone, Google Glass, and other mobile devices.

The class is primarily intended for second-year graduate graphic design students but other students may be admitted. Knowledge of basic web programming is required (Networks & Transactions 742b or Interactive Design 367b are sufficient but not specifically required). Applications will be web-based so that advanced programming is not required. Students need not own a smartphone. No prior experience developing for mobile platforms is expected.

In addition to studio critiques each week, on alternate weeks the class will include reading discussions and a programming lab. Lab topics will focus primarily on front-end programming techniques. Readings are from a wide range of thinkers and genres.
“I was a real amateur at it but I learned what his feeling for chess was.... He said it wasn't a war game, it's an aesthetic game, and you feel the shape of the board as it begins to shift its pattern and you make it become beautiful, even if you lose.”

–The gallerist Julien Levy remembering being taught to play chess by Marcel Duchamp

“This is an A train running local, local, local, local, local, local, local, local, local to Lefferts Boulevard.”

– Conductor unknown

“I was wondering about a radio [broadcaster] in the Netherlands ... he was stu-stu-stu-stuttering. And I was thinking, how is it possible that someone who can do everything, he can be a postman, he can be a scientific thinker, he can be an architect, but not someone who’s working with language... But when he was speaking it was so intense and so believable...”

– Karel Martens

“Entertain us.”

– The Festival, in Charles Stross, Singularity Sky

John Cassavetes and Gena Rowland, Opening Night. “A new way of greeting.”

We begin with the phone in your pocket. Each of us has our own way of speaking, our own way of writing, our own tics and habits. Invent a simple app for the smartphone (one or two screens) whose user interface meets your needs and your needs only. In its language, its ergonomics, its mentality, its worldview, its efficiencies, its poetics, it is as customized as possible to you. Without guidance, it might not be usable or even comprehensible by anyone else.

Your app may have a simple purpose or it may just be a toy or a nervous quirk. If you’re comfortable with programming, implement it in HTML and JavaScript. Otherwise, implement a mockup as static screens or a movie which are sized correctly to fit the phone and can be demonstrated on the phone. In either case, Keep It Simple!

Finally, produce a document explaining your interaction language to others. This document could serve as a guideline for others who want to make apps for you.

Beginning writers are told to “show the readers everything, tell them nothing,” a quote often attributed to Hemingway. How incisive, surprising, and valuable is what you’ve shown us about yourself through your language of interaction? Consider this criteria as you invent your project. Although the app you are designing is a personal one, as a design project your audience is broad – for now, at least as broad as your classmates. Engage us and let us see something new.

A tiny screen

The class will have three Raspberry Pi’s (Linux-based computer the size of a deck of cards), each with a 1.5” diagonal color screen (really tiny!). Resolution is 320x240. Each has a wifi connection. As a class we will decide on fixed locations for these tiny digital signs.

Design screens (slides within a repeating slideshow) for this medium.

There will be no direct user input. Instead, your screens may optionally react to external data from the internet or from a database that you develop. Or, your screens may be static stills or movies and may consider only sequence, user context, and the boundaries of the medium.

Consider how users will encounter these signs. Although the signs aren’t in motion, users are.

Each slide may be created in HTML, CSS, and JavaScript. The Pi uses a Webkit-based browser to display your screens, but its performance is limited and it doesn’t support everything Chrome or Safari does. Limited video support is available.

“Legible London” signs are oriented so that “up” on the map is always “forward” for the pedestrian.

For the final segment of the class, Yale has loaned us a Google Glass from October 27–December 8. Synthesize what you’ve learned so far about designing for private and public audiences, about situation and context for design, and about design that is in motion or fixed in place.

Design a set of screens (“cards”) for Google Glass that appear automatically at particular latitude/longitude locations in New Haven. In addition to being location specific, they may vary depending on the time of day.

Your design will be limited to the possibilities afforded by Google’s “Mirror API”, which includes a particular implementation of HTML (see the Glass Playground for some examples).

Remember that your design will be overlaid on the user’s point of view (“heads up”). Inevitably it has a function of orientation and situational awareness, in whatever practical or fantastical way you may wish to interpret those terms.

You may optionally consider this project as an extension of your work in Part 2, from stationary and external to mobilized and inward.