

The Sketchbook

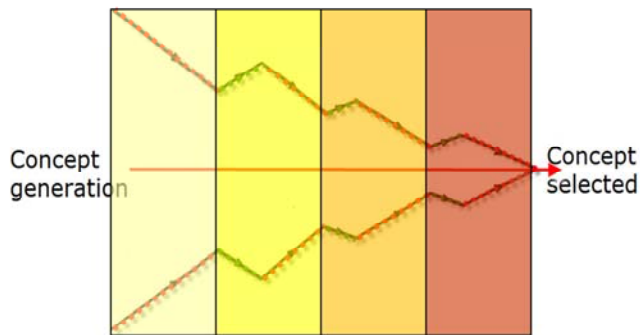


The sketchbook is a basic tool in almost all design disciplines

The Sketchbook

Why a sketchbook?

- *supports the design funnel process*



From Buxton. Modified from Pugh, S. (1990) Total design: Integrated methods for successful products engineering. John Wiley, P. 75

To set the scene, remember the design funnel.

First, each stage is iterative, where one constantly generates and reduces ideas until resolution

Second, the granularity of exploration and development is finer as these iterations progress.

Fundamentally, the sketchbook is a tool that supports this design funnel process, by cheaply and quickly collecting a multitude of ideas and their variations, and recording them for later choice.

The Sketchbook

Why a sketchbook?

- *brainstorm* many initial ideas – both good and bad
- *explore & refine* ideas both in the large and in the small
- *develop* variations, alternatives, details
- *archive* your ideas for later review
- *reflect* on changing thought processes over time
- *communicate* ideas to others by showing
- *choose* ones worth developing

- *record* good ideas you see elsewhere
- *clip* inspiring images from sources like magazines
- *shoot, print and collect* inspiring photos



Specifically, this is what a sketchbook affords

Best practices

Use your sketchbook regularly

- sketch anywhere, anytime, frequently
- only works if you carry it with you



From //momswhomakestuff.com NOTE: Get a new image

Sketchbooks are of little use if you don't have it with you and you don't use it.

A sketchbook is really about getting into the idea of design, into the habit of sketching regularly and frequently.

Properties of a good sketchbook



To consider

- *durability*
- *page count*
- *size*
- *fold over*
- *aesthetics*
- *archival*

Sketchbooks vary considerably. Some things you need to consider are:

- Durability – covers, page bindings (so they last)
- Page count (so you can fill them)
- Size (for carrying convenience)
- Whether you can fold them over (for ease of use in tight spaces)
- Physical and visual aesthetics (you should be proud to carry it; a badge of your profession)

These are not sketchbooks



To consider

- *durability* X
- *page count* ✓
- *size* ✓
- *fold over* X
- *aesthetics* X
- *archival* X

Image from: www.unbeatableale.com

- X
- X
- ✓
- X
- X
- X

image from biblicism.files.wordpress.com

While you can sketch on almost anything, the sketch doesn't make a sketchbook.

Avoid cheap scrap books and exercise books, and bits of paper.

But of course, you can sketch on these and then paste it into your sketchbook.

Sketchbook instruments

The pencil

- cheap, flexible
- easy to carry (in coil binding)



The most basic instrument you need is a pencil, maybe an eraser. The key is to carry it with you always, maybe by inserting into the coil binding of your sketchbook.

Sketchbook instruments

The eraser and sharpener

- handy, but optional

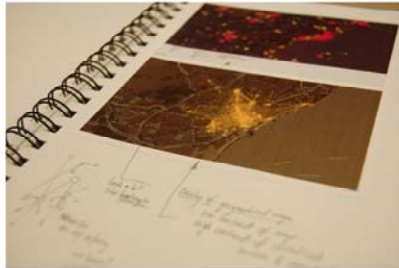
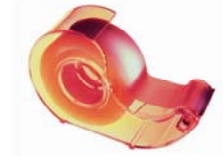


The most basic instrument you need is a pencil, maybe an eraser. The key is to carry it with you always, maybe by inserting into the coil binding of your sketchbook.

Sketchbook instruments

Tape, scissors and glue

- for cutting and pasting in found objects
- don't have to carry it with you



Later, we will talk about how you can use a sketchbook to collect found objects, like magazine clippings.

Scissors, glue, and tape will let you easily add these to your sketchbook

Sketchbook instruments

Small camera

- for taking photos of interesting ideas
- select, print and tape photos into your sketchbook



Every now and then you will come across something that inspires an idea. Take a photo of it, print it, and paste it into your sketchbook.

Sketchbook instruments

Other media

- *sure, as long as it doesn't get in the way*



Of course, there are myriads of media. Feel free to use them, but be careful. Remember, sketches should be cheap, fast, easy to do, and often of low fidelity.

If media gets in the way of this, go back to a pencil.

Filling your sketchbook

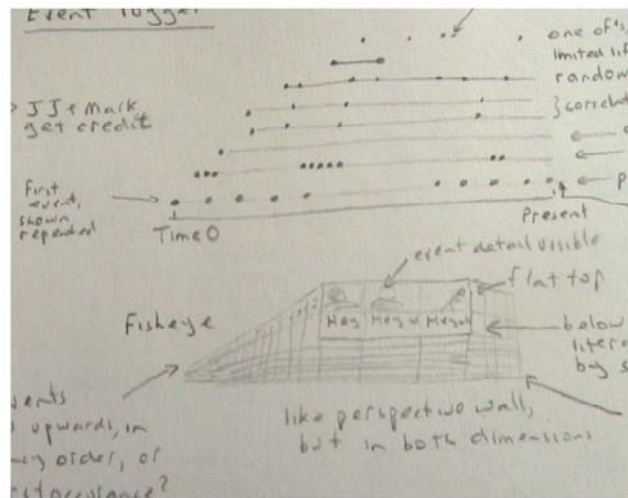


So, now that you have a sketchbook and some instruments, what should be in your sketchbook?

The following illustrate some samples.

We will get into these and others in considerably more detail in later talks.

You don't need to be an artist



portion of a page from Saul Greenberg's sketchbook

Sketching is about generating and collecting ideas.

If you can draw, great.

But an ugly, crude drawing can capture an idea as well as a beautiful one.

Sketchbook examples



artist's sketch page by Emily R. Feingold

Artist

- ideas
- variations

Lets look at a few examples of sketchbooks from various fields, where we see how they support idea generation, variation, and ultimately choice.

In this example, we see various sketches, where the artist is exploring and varying posture and form. Note how incomplete some of them are, where they let the mind's eye fill in possible details

Sketchbook examples



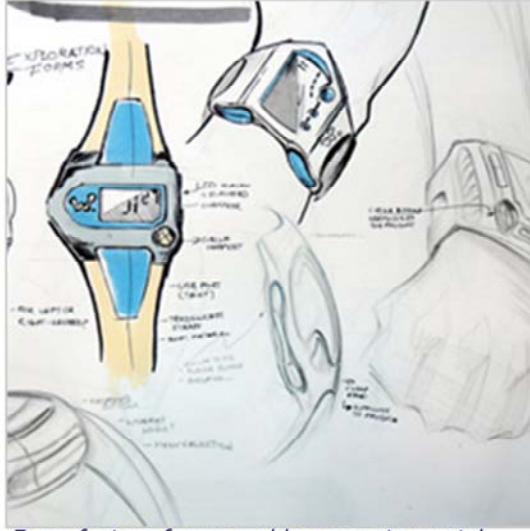
Artist

- variations
- studies

artist's sketch page <http://www.fmhs.cnyric.org/art/StudioFoundation/Sketchbook/sketchbook.html>

Artists also do variations of a form, as studies that help them understand the nuances of that form

Sketchbook examples



Form factors for wearable computer watch

Source: sketch page from student Industrial designer Samnang Eav

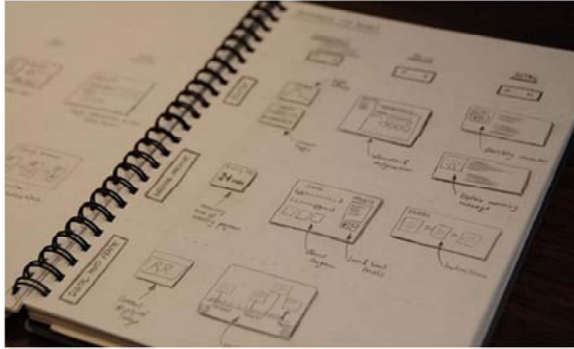
Industrial designer

- ideas
- variations
- annotations

Industrial designers make fairly similar uses of sketches, in this case in exploring various ideas and details of a form factor.

Note that sketches such as these can include textual annotations, which themselves suggest possibilities

Sketchbook examples



Idea variations

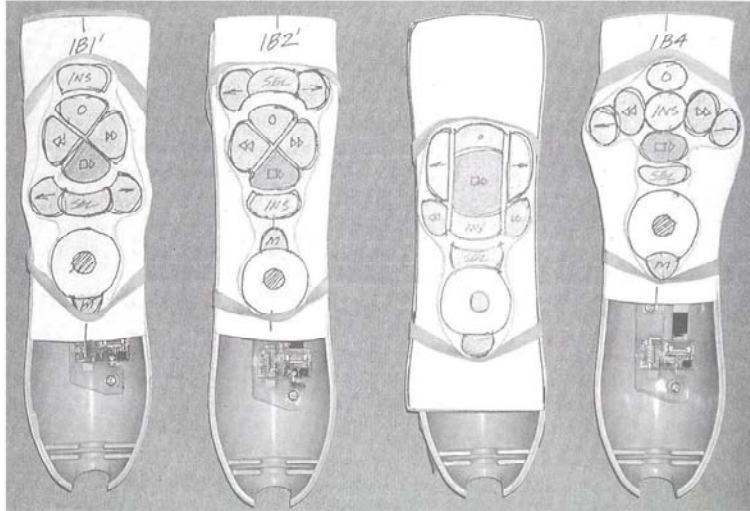
Four different versions of an idea

Source: Nicolai Marquardt sketchbook, with permission. See <http://www.nicolaimarquardt.com/blog/>

Sketches serve many purposes.

This one collects four different versions of an idea

Sketch examples – design variations

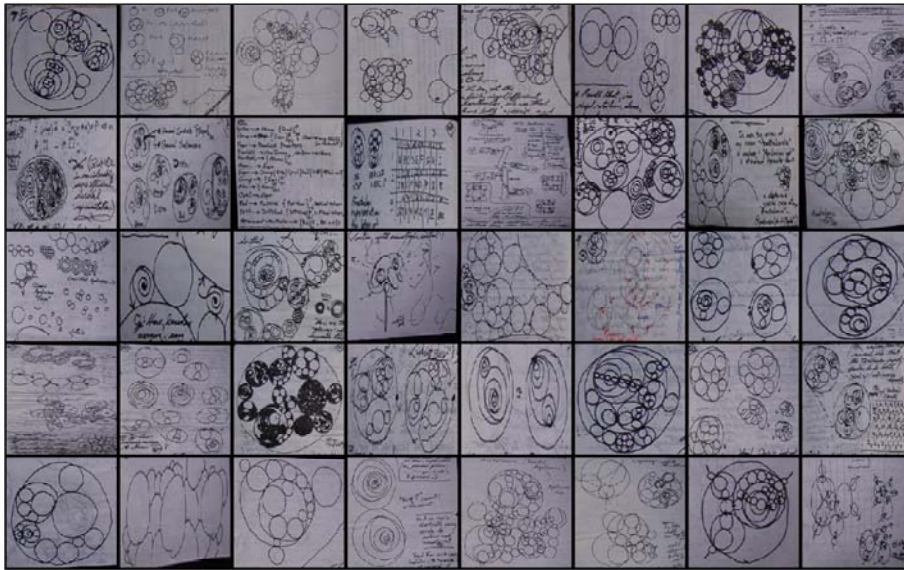


¹From Carloyn Snyder's Book Paper Prototyping (2003) Morgan Kaufmann, p350

This example – in this case a photo – shows of 4 different remote control designs, where the sketches are made from paper taped on top of the lower part of a remote control.

Sketchbook examples

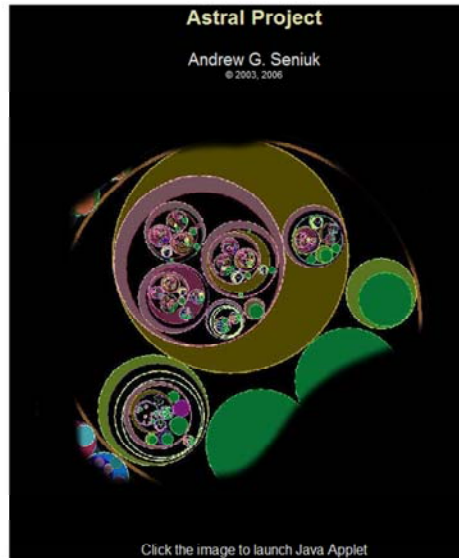
many ideas +
variations



Computer science student Andrew Seniuk – a metaprogramming environment (with permission)

The key idea is to have many ideas, and many variations. Paper and pen is cheap and quick. Explore.

Sketchbook examples

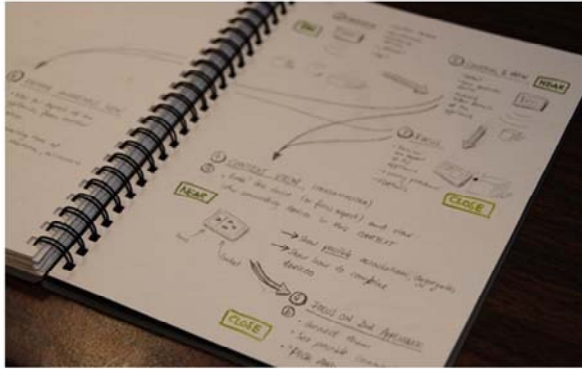


The result

Click the image to launch Java Applet
Computer science student Andrew Seniuk – a metaprogramming environment (with permission)

When you really understand the design space and the choices available, you can then proceed to build the product

Sketchbook examples



Overviews

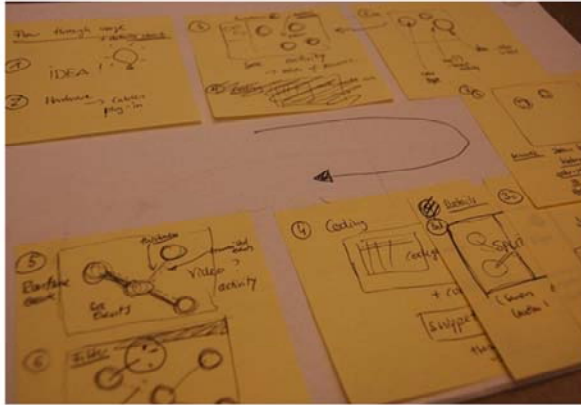
- flow over time
- relationships

Arrows indicate relationships and flow

Source: Nicolai Marquardt sketchbook, with permission. See <http://www.nicolaimarquardt.com/blog/>

While this one shows how an idea flows over time, and the relationships between different parts of the idea

Sketch examples - storyboards



Overviews

- flow over time
- relationships

Storyboard

Source: Nicolai Marquardt sketchbook, with permission. See <http://www.nicolaimarquardt.com/blog/>

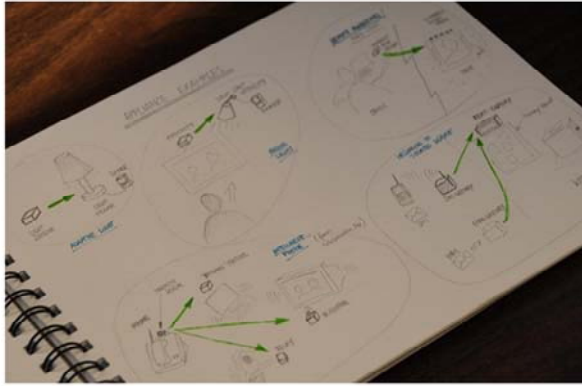
Sketches can also be storyboards, where key scenes are shown (much like a comic book)



¹From Carloyn Snyder's Book Paper Prototyping (2003) Morgan Kaufmann, p11

Sketches can show storyboard transitions, where a different action can result in a different flow of activities

Sketchbook examples



Scenarios

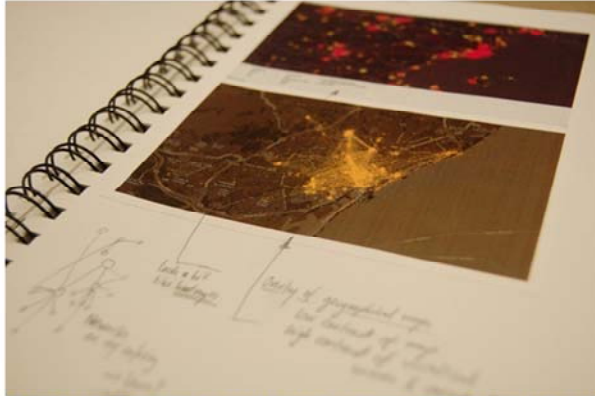
- stories of envisaged uses

Five envisaged scenarios of a technology in action

Source: Nicolai Marquardt sketchbook, with permission. See <http://www.nicolaimarquardt.com/blog/>

Sketches can also depict how an idea (or product) is used via visual scenarios, or stories

Sketchbook examples



Collecting

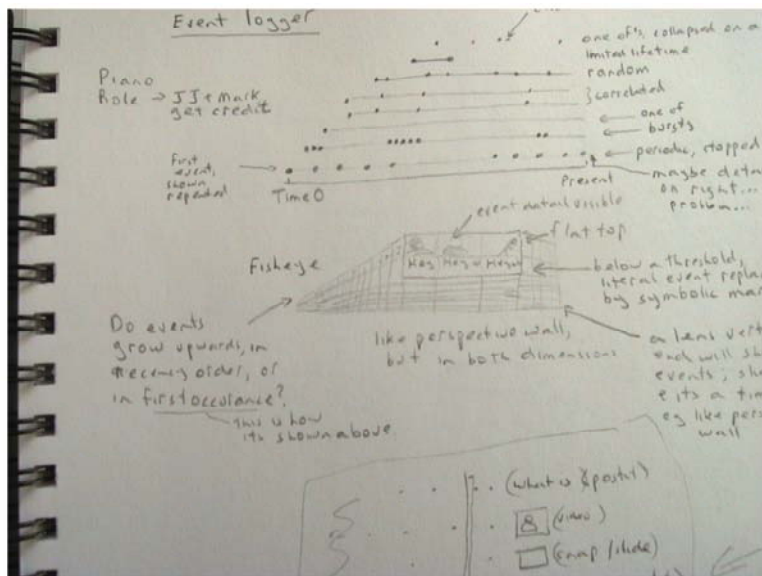
- materials related to an idea

Information visualization techniques – from magazines

Source: Nicolai Marquardt sketchbook, with permission. See <http://www.nicolaimarquardt.com/blog/>

Sketches can be used for collecting materials seen or found in other places; these can inspire you as well. Indeed, much creativity is about finding, varying, and remixing ideas that already exist

Sketchbook examples

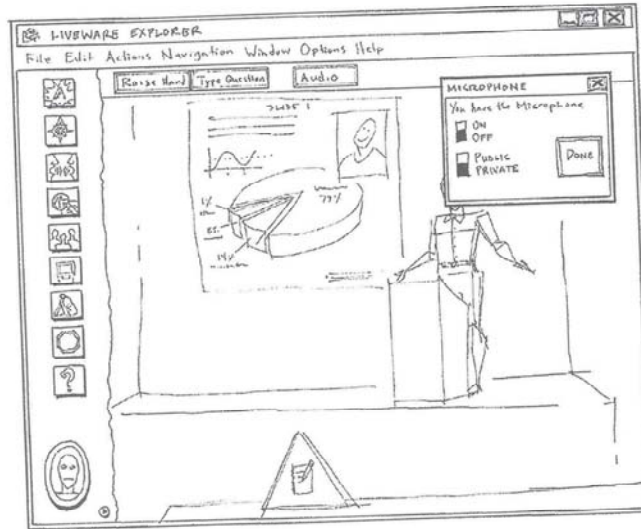


crude
drawings
annotations

portion of a page from Saul Greenberg's sketchbook

Sketches vary significantly. This one is of very low fidelity (i.e., a crude drawing) and is heavily annotated

Sketch examples – screen snapshot



¹From Carloyn Snyder's Book Paper Prototyping (2003) Morgan Kaufmann p31

While this one is almost a literal and highly detailed representation of what would expect a screen to look like at a moment in time.

Sketchbook examples – details to prototype



Concept:

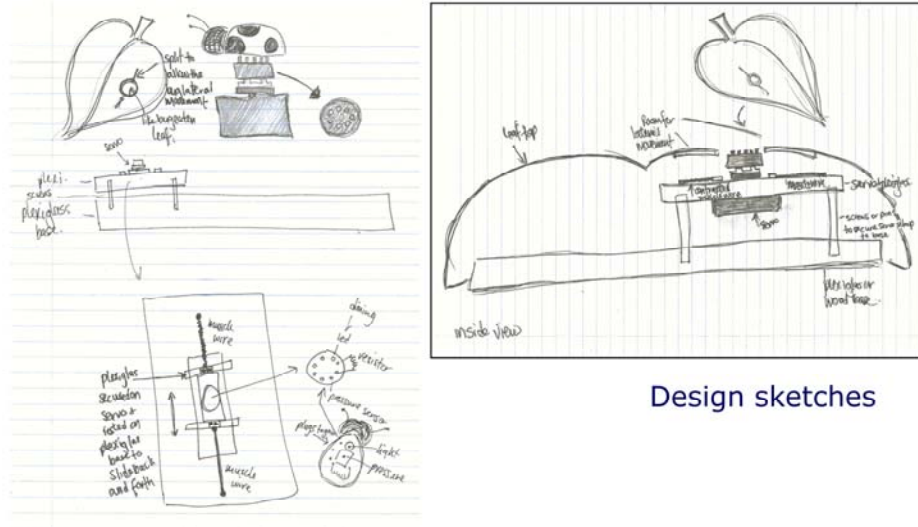
- IM contacts as bugs on a leaf

McPhail, S. (2002) Buddy Bugs: A Physical User Interface for Windows® Instant Messenger.
Western Computer Graphics Symposium (Skigraph'02), March

Here is an example of a sketch generated by Susanna McPhail, who was developing an idea for a physically based instant messenger system.

Her concept was bugs (each representing one of her IM contacts) on a leaf, that would somehow light up and animate. This is one of her first sketches.

Sketchbook examples – details to prototype



Design sketches

McPhail, S. (2002) Buddy Bugs: A Physical User Interface for Windows® Instant Messenger.
Western Computer Graphics Symposium (Skigraph'02), March

As she began to refine her idea, she started adding detail about how it could operate.

Sketchbook examples – details to prototype



Physical icons

- clay, glass
- also a sketch!

McPhail, S. (2002) Buddy Bugs: A Physical User Interface for Windows® Instant Messenger.
Western Computer Graphics Symposium (Skigraph'02), March

She then built the leaf out of papier mache, glass forms, clay, and wire – this is also a sketch!

Sketchbook examples – details to prototype



Prototype

- Papier mache
- also a sketch!
- see video [\[.wmv\]](#)

McPhail, S. (2002) Buddy Bugs: A Physical User Interface for Windows® Instant Messenger.
Western Computer Graphics Symposium (Skigraph'02), March

Her final system – now a fully working prototype – shows the clear relation of her original sketch idea to the implemented system.

You now know

Sketchbooks are for:

- brainstorming, exploring, refining varying, archiving, reflecting, communicating and choosing ideas
- recording good ideas you see elsewhere

Sketchbooks are:

- *convenient (pages, size, fold over), durable archive, aesthetic*

Sketchbook instruments are:

- *pencil*
- *optional eraser, sharpener, glue, tape, scissors, camera, and other media*

Sketchbooks can be filled with:

- *Your sketches (many different kinds) and found objects*

Sketchbooks are used regularly

- sketch anywhere, anytime