[rootings], created by Mary Flanagan, is a set of interactive game environments which offer narratives about time and memory.

[rootings] is a collection of interactive games in which users explore the idea of time within the context of an experimental narrative loosely based around different life episodes that have to do with time passing, skipping, rewinding, and time travel / memory. Elements of quantum mechanics and string theory open the door to scientific inquiry about time in the 21st Century, inquiries which can begin with our daily domestic, personal experiences. We can think about remembering an episode in one’s life within the context of scientific theories of time, for example, as more like a simultaneous event, parallel world, or constant, not simply a memory or a past happening. This project uses a scientific background in perception of time and the physics of time in string theory to tease out ideas about time in narrative, mental order/disorder, and interactivity.

In [rootings], we encounter time in unusual ways; each string or episode itself is a recurring or cyclical event which takes the form of an abstract yet interactive “arcade style” game. Here, I am using game systems as materials and methods by which to explore these boundary zones, involving both intellectual hypotheses and the commonplace as locations and manifestations of socio-technological phenomenon—both the conditions of time and memory are extremely difficult to study and are heavily subjective.

The main interface of [rootings] is based on a reverberating circuit diagram. The brain, an organ composed of over 50 billion nerve cells, is connected by axons and dendrite conduits. Any type of activity in the brain (hearing a sound, problem solving, reading) sets off neural circuits throughout the nerve cells. While every experience creates new pathways, some of the circuits created repeat over and over, marking out a fixed location and becoming part of memory. These reverberating circuits start with input which produces a signal, which in turn becomes encoded within a neuroloop, producing a short-term memory function. A reverberating circuit, for example, creates physiological memory.

[rootings] encourages players to begin digging around in these circuits, using the physiological actions of clicking, tracing, and the repetitive process of game play to reinscribe memories from maker to player.
The heart of this research project is based around recent readings in physics, neurology, and most notably, string theory, which support the idea of tangible simultaneities, much like real, visceral memories or deja vous. The work deals directly about time and memory through rich imagery and sound and through the perspective of a woman maker and through the use of stories and relationships in personal, everyday, almost mundane occurrences to show that such slips of time are equally everyday happenings.

[rootings], like other web art projects, is not "created" unless users are interacting with it. The work becomes a blend between research, process, and performance. Like Andre Breton and other critic/makers, I celebrate lapses in time, perhaps because in the very act of making creative work one loses oneself to time utterly.

For several games, I use an engine entitled Narrasteroids developed by me, based on the everpopular arcade game, with stellar student assistant Eric Hortop of Montreal.

Below is a brief description of the games users will encounter within [rootings].

**Night**
Night tells the personal story of the fear/memory of the arrival of night visitors at the maker’s home in the middle of the countryside when she was very young.

**Ulio**
Ulio is a retelling of a timeslip with a friend on the land of the former town of Ulio, north of Milwaukee on Lake Michigan. In the 1800s the town burned to the ground, and the maker and friends visited the site several times, each with its own timeslip.

**White**
This repeated memory of her grandmother’s house turning white has stayed with the maker until adulthood. Flanagan retells the memory in game format.

**Dolly**
Children experience time shortenings and lengthenings perhaps more than adults do. But memories of time slips are bound up in memories of objects and personas from childhood such as favorite toys or siblings. Dolly allows the user to trace through some of these memories.

**Consumer**
Based on a letter from Flanagan’s grandmother, this game plays with the notion that in the U.S., once there is nothing left to consume (ie products and services), there is no other activities to fall back on, and nothing left to do. This game raises awareness of the precarious position of desire and agency in consumer culture.
**House**
Tracing the image, the user experiences the of displacement when home is not really home anymore.

**Displaced**
Multiple, simultaneous, this game is a play on time's forward, backward, and slipping motion.

**Habits**
Players order the rituals that construct up the maker's day while creating [rootings], glaringly leaving out the most habitual aspect of contemporary North American culture work.

**Labyrinth**
Are there parallel or simultaneous levels to our realities? When we wander city streets

**Train**
Playing with Einstein's notion of relativity, this arcade style game generates the story of the maker's experiences of time slips in the Montreal subway.

**Hand**
Based on memories from relatives and the WPA public works interviews, Hand pieces together bits of memories like bits of bone in the hand.

**Trees**
To a tree, roots bring nourishment up and down, both rooting the tree in a spot and providing nourishment for the leaves and thin branches soaring above.

**Displaced + Time2**
Displaced and Time 2 are small interactive bridge games that play with language about time.

**Inspiration (for further reading)**


Burke, James. (his many works)


Dowden, Bradley. 1998. [http://www.utm.edu/research/iep/t/time.htm](http://www.utm.edu/research/iep/t/time.htm)


Interview with James Gleick.  
http://www.alphabetstreet.infront.co.uk/Interviews/JamesGleick.jhtml