

The Materialising Memories research program<sup>1</sup> (van den Hoven, 2014) integrates cognition research with TEI, to design for everyday remembering practices. This often engages autobiographical memory, the "memory for the events of one's life" (Conway & Rubin, 1993). It relates to individual identity, problem solving and future planning, and social functions such as dealing with relationships (Bluck, 2003). These functions are particularly relevant for TEI because of the prevalent use of digital media, digital services and interactive devices in remembering practices. However, because recognition requires less cognitive load compared to recall, remembering practices can be further enhanced by engaging with a physical presence. *Materialising* digital accumulations or providing physical reminders gives them a place in our everyday environment, making them easier to interact with or act upon.

The following examples integrate storytelling, personal remembering, embodied cognition and tangible interaction and support the social function of autobiographical memory. The tangible objects in these examples serve as *memory cues* (van den Hoven & Eggen, 2014), to support remembering and the retrieval of information, and support different types of *storytelling*.

The Digital Photo Browser system (van den Hoven & Eggen, 2003 & 2008) includes a tablet holding personal digital photo collections and a TV used to display individual photos. Electronically 'tagged' physical holiday souvenirs trigger the presentation of subsets of photos when placed on a coffee table. Both the souvenir objects and photos can cue specific memories and support remembering and storytelling. This system supports serendipitous conversational storytelling around photo archives and souvenirs, as happens when guests visit someone's home.

StoryShell (Moncur et al., 2015) is a bespoke design for a mourning mother to commemorate the death of her 15 year-old son, and to retain contact with his friends. It is a tangible device that plays audio recordings of friends' stories when the device senses it is being held. The StoryShell object is representative of the lost loved one and his relationship with his friends. It supports unsolicited, informal storytelling, by allowing the mother to listen to stories her son's friends share to remember him by.

StoryBeads (Reitsma et al., 2013) is a recording device in the form of a basket. It is activated when an electronically tagged bead is placed on it. Stories are recorded onto the beads during traditional performances, to be listened to later, anywhere, anytime. The basket object supports and represents the oral-storytelling traditions of the South African BaNtwane culture, with each tagged bead representing a specific story that was traditionally shared around the campfire. It supports more formal and performative storytelling as stories are memorised verbatim to ensure the performances do not change.



Fig. 1. F.I.t.r.: Digital Photo Browser (van den Hoven & Eggen, 2008), StoryShell (Moncur et al., 2015) and StoryBeads (Reitsma et al., 2013).

These examples show the richness and breadth of how TEI can support storytelling and remembering practices. There is more to be done to support the social function of autobiographical memory (Bluck, 2003), including having TEI research acknowledged and adopted by other disciplines.

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<sup>1</sup> [www.materialisingmemories.com](http://www.materialisingmemories.com)

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