



Digital Me

Leveraging your digital footprint to track your time

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Knowledge work is changing



Tuukka Lehtiniemi et al, Trends of Knowledge Work and Needs for Knowledge Work Tools, Re:Know White Paper.

Placing the knowledge worker in the centre

- ▶ The *only stable thing is the knowledge worker*:
 - ▶ your physical location, employer, project or organisation may change
 - ▶ you keep your experience, skills, and human connections – your “personal data”
- ▶ In our research we took this as the starting point: placing the knowledge worker in the centre

Your digital footprint in knowledge work

- ▶ Much of knowledge work is digitally mediated
- ▶ Digital interactions are essentially *always* logged
 - ▶ potential to solve many of the knowledge work challenges!
 - ▶ automatically tracking work
 - ▶ memory, recall
 - ▶ proactivity
 - ▶ privacy challenge
 - ▶ individual needs to be in control → MyData principle
- ▶ We developed the Digital Me (DiMe) software for this purpose
- ▶ Tekes-funded Re:Know project: HIIT (Aalto & UH) + FIOH



Digital Me (DiMe)

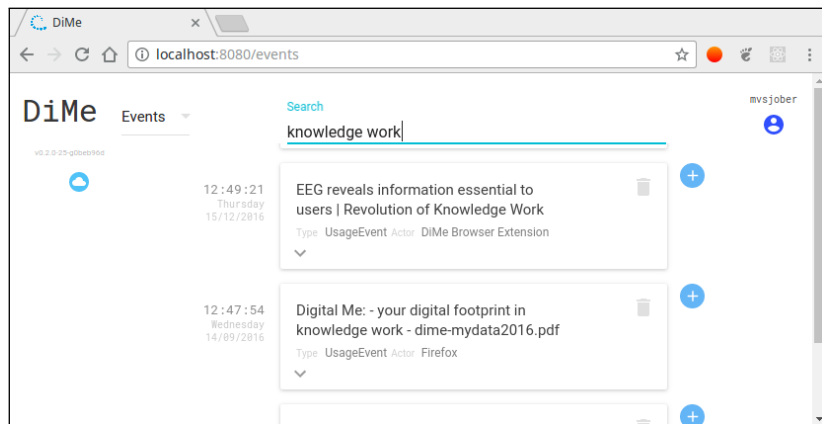
- ▶ Logs your digital (knowledge work) interactions
- ▶ Free and open source software, open ecosystem
- ▶ *Loggers* record events from person's actions or environment
- ▶ *Applications* provide user interfaces for viewing, manipulating, and analysing events



<http://reknow.fi/dime>

DiMe version 0.2

► Prototype interface



The screenshot displays the DiMe web application interface. The browser address bar shows the URL `localhost:8080/events`. The page title is "DiMe" and the current view is "Events". A search bar at the top right contains the text "knowledge work". The user's name, "mvsjobber", is visible in the top right corner. The main content area lists several events:

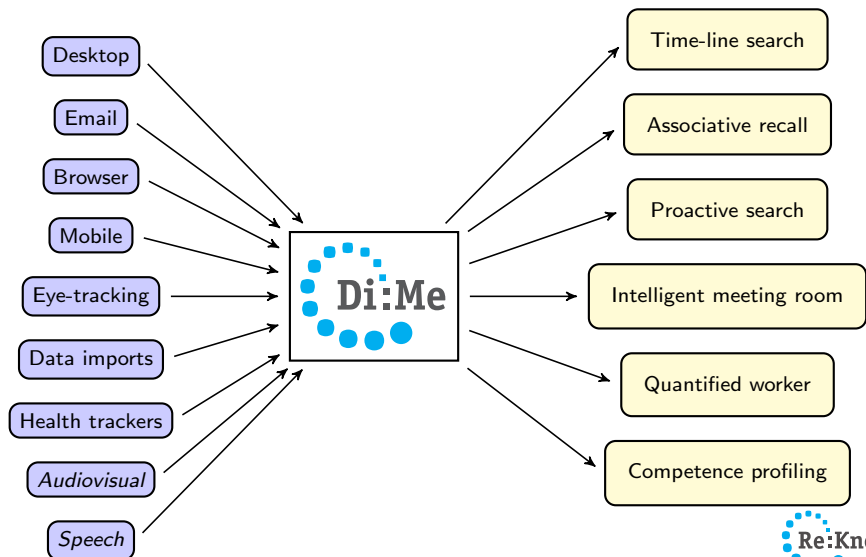
- Event 1:**
 - Time: 12:49:21 Thursday 15/12/2016
 - Title: EEG reveals information essential to users | Revolution of Knowledge Work
 - Type: UsageEvent Actor: DiMe Browser Extension
- Event 2:**
 - Time: 12:47:54 Wednesday 14/09/2016
 - Title: Digital Me: - your digital footprint in knowledge work - dime-mydata2016.pdf
 - Type: UsageEvent Actor: Firefox

Each event card includes a trash icon and a plus sign icon. The interface also shows a version number "v0.2.0-25-g0be96e" and a cloud icon in the top left.

DiMe potential

- ▶ DiMe augments the human with a “digital memory” of previous states, events, actions – in general any personal data
- ▶ Many applications can build on this collected data
 - ▶ provide insight into the person’s own behaviour
 - ▶ anticipate future behaviour
- ▶ Just a few potential ideas explored in our research project . . .

Di:Me ecosystem

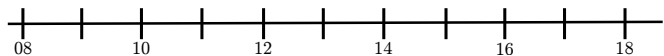


Example: tracking working time

- ▶ Managing working time and work load are common problems for knowledge workers
- ▶ Are you allocating your time right?
 - ▶ maybe you spend too much time managing your email, and not enough on the really important things?
 - ▶ chasing deadlines instead of planning further ahead?
- ▶ Can you accurately predict how much time a task will take?
 - ▶ anticipating time usage helps managing your working day
 - ▶ for example, knowing when you have to say “no” to new endeavours

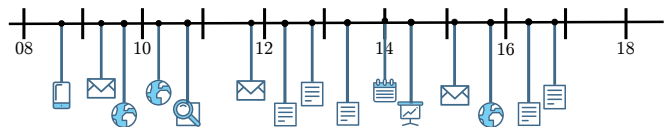
Tracking working time with DiMe

- ▶ DiMe collects your actions during the working day
 - ▶ also other sensors useful, e.g., health tracker
- ▶ Machine learning: automatic project/task classification



Tracking working time with DiMe

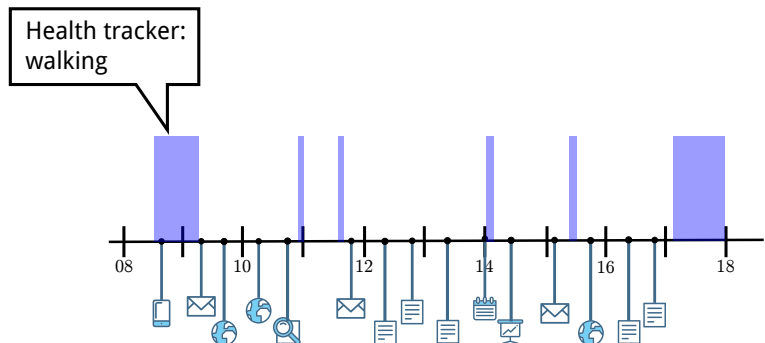
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Icons designed by Freepik from Flaticon.

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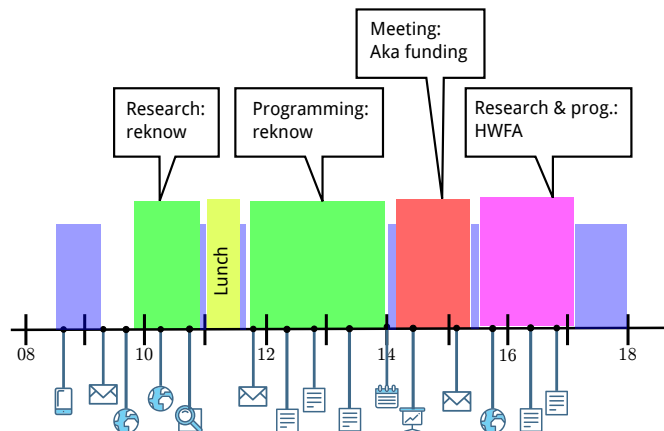
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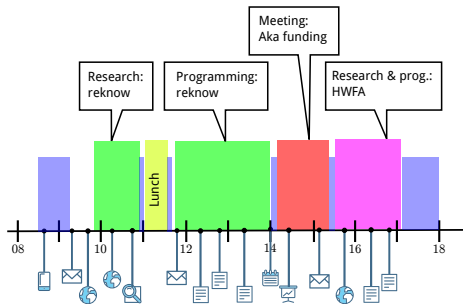
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Tracking working time with DiMe



- ▶ Tracking and analysing time allocation
→ increased self-knowledge
- ▶ First step to answer the time management problem

Conclusions

- ▶ Knowledge work is changing
 - ▶ increasing complexity, automation, information overload
- ▶ Digital Me: personal data part of the answer
 - ▶ logging and tracking can be used for good!
- ▶ Time tracking
 - ▶ AI/machine learning can help!
 - ▶ self-knowledge essential for time management issues

