

Processes of Reminding and Requesting in Supporting People with Special Needs: Human Practices as Basis for Modeling a Virtual Assistant?

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KOMPASS

Workshop on Ethics in the Design of Intelligent Agents (EDIA)

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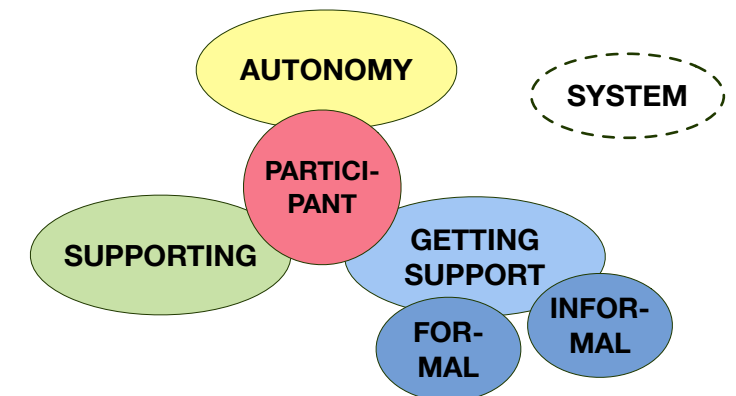
- **Virtual assistant as a daily companion** for people with mild cognitive impairments and dementia
[pre-project: Henne et al. 2014, Kramer et al. 2013, Pitsch et al. 2015, Yaghoubzadeh et al. 2012, 2013, 2015]
- **Interactional Linguistics:** Modeling of interactional procedures and strategies, focus on multi-modal interaction, practices of everyday life and influence of technology, ethical implications of human-machine-interaction

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1. Time Management, Reminding & Requesting

- Research on individual forms of **assistance and autonomy** in supported living provided by support networks

[Cyra et al. (2016)]



Network of Autonomy and Support
[Cyra et al. accepted]

- Multi-modal forms of **reminders essential to keep** up important tasks and **everyday routines**

[McGee-Lennon et al. (2011), Cyra et al. (2016)]

- Verbal modeling of reminders as requests: idea of **‘simple’ reminders**

[Wunderlich (1984)]



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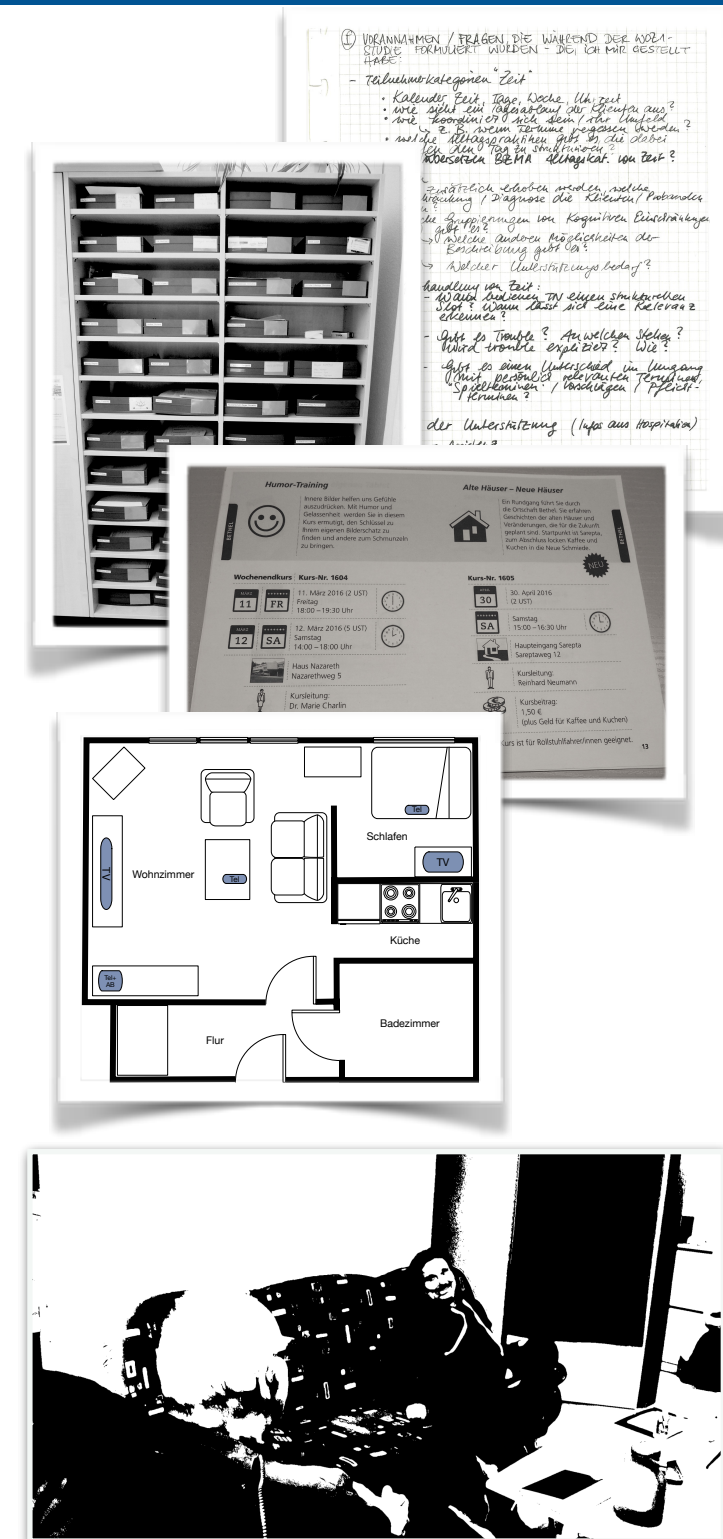
1. Research questions

- A. How can we describe the **activity of reminding** and the actual requests **in every day practice** be described?
- B. How are reminders **established in a meaningful way**, so that their intent and consequences are understood and followed by meaningful activities?
- C. (How) Could the reminding and requesting practices be **implemented into an assistive technology** and how could an ECA as a daily-assistant be **integrated into the social and institutional network** that encompasses people with special needs?

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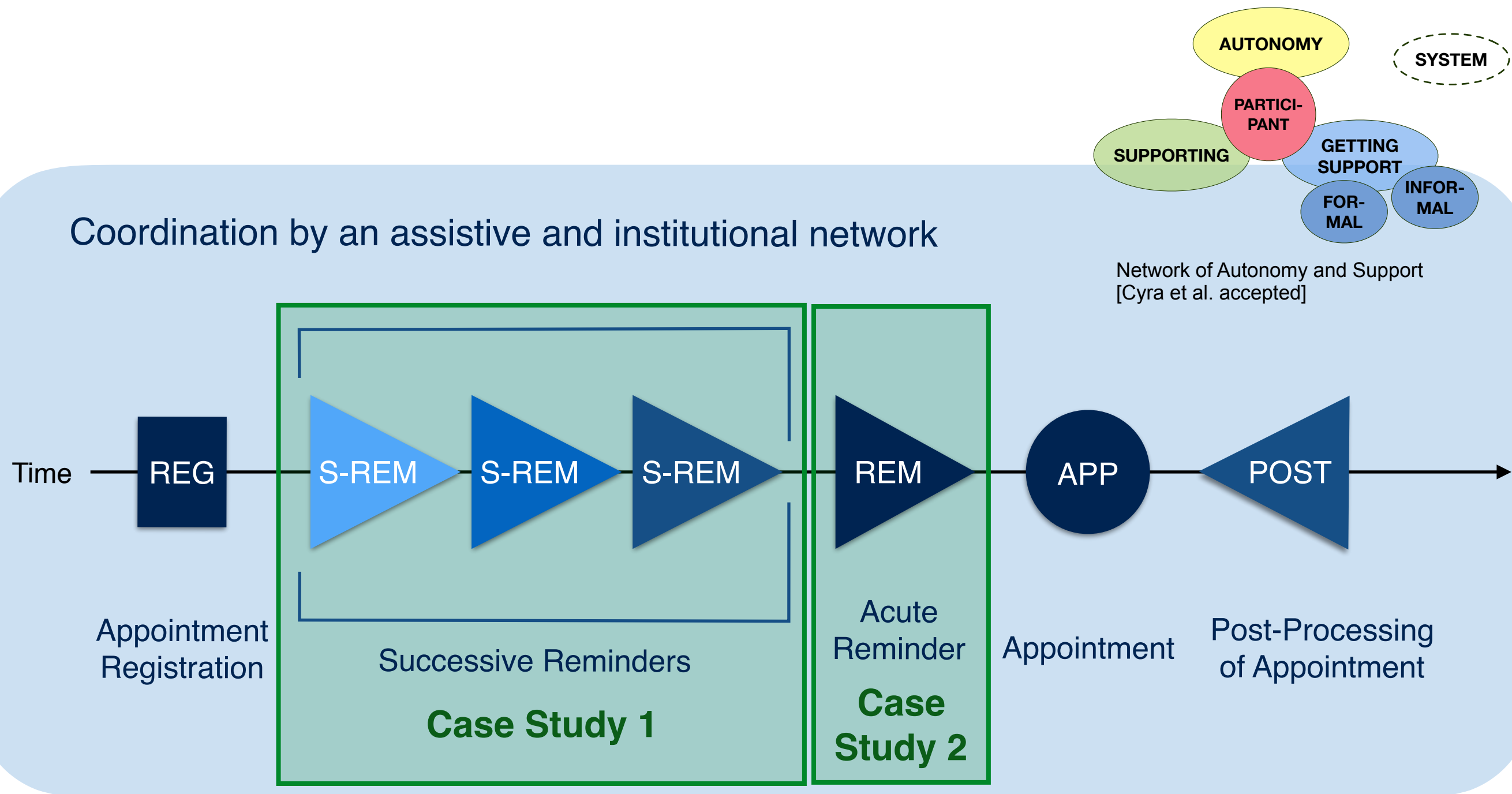
2. Method & Data

- Data collection: **Focused ethnographic research** in an institution for supported living
- Data analysis of video data based on **Conversation Analysis**
- Understand and reconstruct **micro-sequential processes of interactions**, the process of reminding and the interaction order



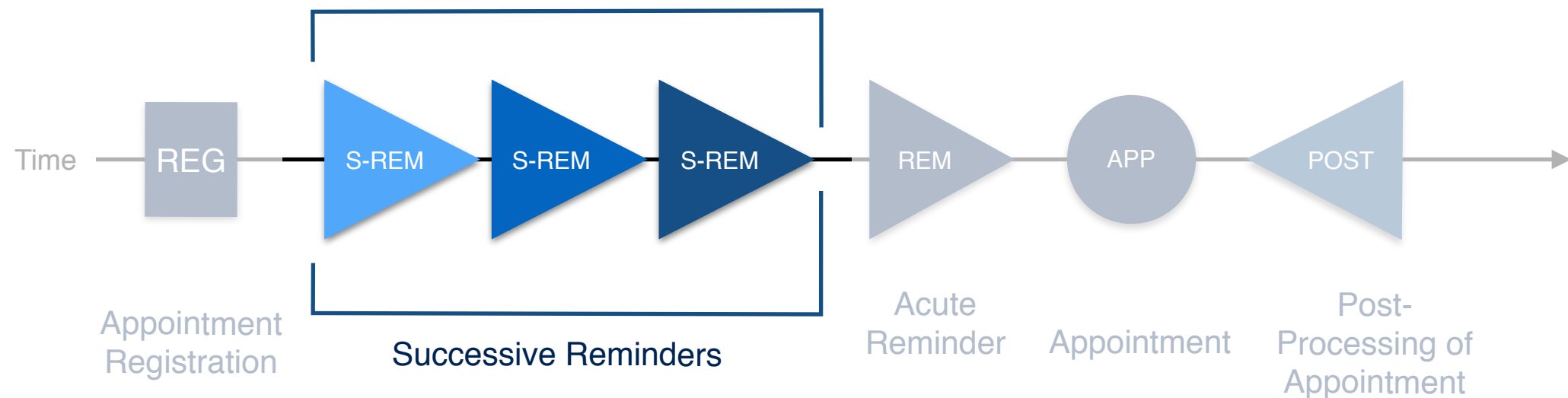
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3. Reminding as a process



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3. Case Study 1: Personal Successive Reminders



- Conversational practices provide **security, planning certainty** and **reliability** for the client —> social function
- Joint planning = the basis for **meaningful and transparent** establishment of upcoming reminders
- Individual information about appointment **context**, help to **anticipate** acute reminders

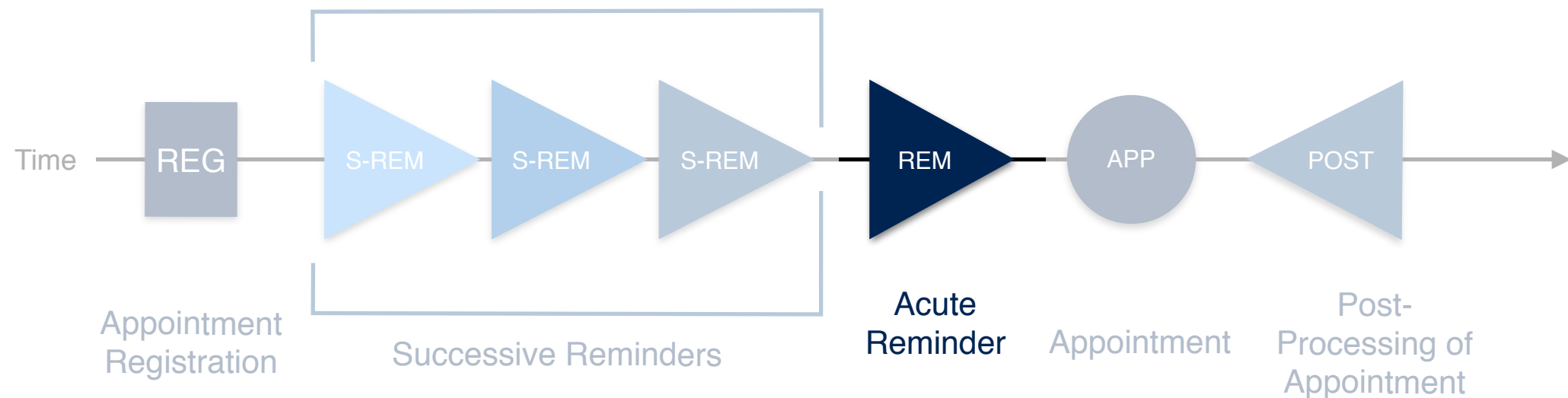
3. Case Study 1: Personal Successive Reminders



VIDEO CASE STUDY 1

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3. Case Study 2: Acute Reminder



- **Requests are contextualised** (no isolated requests/utterances, but embedded in a request context); impact of the **participants' knowledge** about consequences and meaningful activities
- **Complex interplay of getting attention / securing contact** and applying a subtle reminder upgrade strategy
- The **reminder process** is **highly adaptive and flexible** and allows to react to changing circumstances within social situations based on close observation (or monitoring) practices.

3. Case Study 2: Acute Reminder



VIDEO CASE STUDY 2

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4. Implications for Assistive Technology

- **Reminding** = highly complex, adaptive and individual **process in situated interaction**
- **Verbal structures** and knowledge about **context** to produce meaningful reminders, provide security & reliability
- Exact **timing and multimodal monitoring** to accurately apply verbal strategies in dialogue-based interaction
- **Classification** of participant and attention status, differentiation of social interactions and context

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4. Ethical Considerations

- Which **role and task(s)** should the virtual assistant have in the support network (social, organizational)?
- How can virtual assistants be **legitimized to request and provide meaningful reminders?**
- **System access** and **system transparency** to understand the origin/context of appointment entries
- Research for and with a **special user group** to tackle specific tasks and challenges on the basis of specific competences

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Thank you for your attention!

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Project website:

https://www.uni-due.de/kowi/forschung_pitsch_kompass.php

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