

# Supporting the Planning and Organization of Multiple Activities in the Workplace

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**Abstract.** Many studies have shown how knowledge workers face challenges while multi-tasking among several projects and initiatives at the workplace. Researchers and consultants of personal productivity have identified practical strategies and processes that people use to face, plan and manage their activities. Our work is based on the analysis of those processes and strategies involved in personal activity management (PAM), emphasizing the planning aspects of it, with the goal of designing appropriate supportive information technology.

**Keywords:** Personal Activity Management, Planning Activities, Personal Productivity, Knowledge Workers, Information Technology.

## 1 Introduction

Many studies have been conducted in the last forty years to understand how knowledge workers divide their time and efforts among several projects and initiatives at the workplace [2,3,5]. Some of these studies have shown that activities performed by information workers are varied, fragmented, and brief, which forces them to focus on each activity for a short period of time [5]. This reality makes information workers to engage in explicit efforts to keep control over their commitments, and use strategies to organize, prioritize and focus on what they have and want to do [3,5]. We define this type of effort as personal activity management (PAM), a kind of meta-work that expands beyond those necessary efforts related directly to accomplish the purpose of a specific activity and focuses on the orchestration of the complete set of activities that the person has committed to do. Results of previous studies show that to a minor or greater extent all knowledge workers engage in PAM efforts on a regular basis [2,3,5].

Defining adequate technological support for PAM is an important and relevant challenge because an efficient management of activities often results on better personal and group productivity [2]. Unfortunately, studies coincide on pointing out how current technologies fail to address the challenges imposed by PAM [3,5]. Because PAM have been commonly associated to efforts toward the management of time, documents, contacts, messages and the physical space [3, 6], this has resulted on technological solutions that just partially address the issues around it. Some

technological solutions are designed to pay attention to the communication channels that give origin to activities [3], others are centered in the management of resources to facilitate the fast retrieval of work context when users switch from one activity to another [6], and others aim at creating a more natural integration between PIM (Personal Information Management) tools and resources. Few available technologies focus on what we argue is the central and fundamental challenge of PAM: offering support for planning and organizing activities. This paper presents our work in progress aiming at developing an application to support PAM on that particular aspect.

## 2 Planning activities

We can understand PAM as encompassing processes and strategies for planning activities in the short, medium and long-term, allowing users to be more proactive and less reactive when dealing with job commitments. With proper PAM, information workers get a perspective about the current status of each one of their activities, and with this perspective they can focus intelligently on those activities that demand their immediate attention.

We based our understanding of PAM on previous work and analyses in order to identify some of the essential characteristics of the type of support required [1,2,4,5]. Two of them [1,4] can be characterized as empirical methodologies offering advice on personal productivity, with emphasis on time-management and activity planning. The other two [2,5] emerged from ethnographic-based studies and describe the strategies and processes used by informants to manage their activities.

Gonzalez and Mark [5] proposed the *overview process*, a set of strategies to achieve a constant focalization of those activities to be done. They argue that people constantly make efforts to gain an overview of their activities, gaining knowledge about their scope and purposes, their temporal constraints, degree of development, and the next actions to conduct in each one. They also argue that with this overview (which is represented on physical or digital artifacts) people can maintain a state of preparedness; they can make better judgments with respect to their priorities and can move in and out of their activities as circumstances change or opportunities arise.

The work of Barry and his colleagues [2] shows different strategies used by managers to keep personal agendas. Their study shows how they implement their agenda and highlights the satisfaction and feeling of control they gain through this process. The *agendazing process* also highlights how managers have the fundamental function of simultaneously handling short and long term goals. Their findings provide evidence regarding the relevance of prospective and retrospective analyses

Covey's methodology [4] offers advices on how to achieve a better PAM, including better ways to plan activities. Covey's methodology is based on seven principles (habits), where the first three are focused on PAM. Covey emphasizes the importance of being proactive and clear in terms of the goals that the individual aims to achieve. In the third habit (*put first things first*), Covey offers specific processes to deal with organization and planning activities, focusing on short and medium-term activities offering a priority's framework to deal with them.

Finally, David Allen suggests a methodology named Getting Things Done (GTD) which is based on the creation of lists of tasks [1]. GTD invite people to write down all they want to do in a trusted system that will act as external reminder system as well as additional support to ensure that we will get the right reminders at the right moment. Allen suggests that materializing commitments helps to clarify what is necessary to be achieved and what are the specific actions required to achieve it. Allen's methodology also provides a framework to process and organize work at two distinct levels: personal projects and the tasks (actions) to achieve them. He makes particular emphasis on defining the next-action required for each project.

### **3 A consolidated model for PAM**

Our analysis of previous work aims at integrating their main ideas and recommendations and producing a consolidated model for PAM that can be used as the foundation to design supportive technology. The model consists of five processes:

Gestation: This process is conducted to identify the efforts that people carry out to make a representation or materialization of activities, actions or job commitments that need to be done. Gestation helps to clarify what is to be achieved and what are the specific actions needed to achieve it.

Classification: This process involves efforts to provide meaning to all the representations made during the gestation process. This meaning can be implicitly or explicitly indicated by people (e.g. scheduled, to do now, delegate, etc.)

Redefinition: Activities are dynamic and evolve over time. This means that activities are likely to require new actions, discard or postpone others. Through this process people maintain their activities updated according to the circumstances.

Focalization: Every day, people can just focus on a sub-set of the entire universe of activities for which they have committed time. This subset is usually defined in advance (e.g. at the beginning of the day), and determined by personal preference or temporal constraints (e.g. scheduled meetings).

Revision: This process is used by people to get a general or partial perspective of their accomplishments to make better judgments with respect to their priorities and respond intelligently to circumstances. This process involves short, medium and long term perspectives as well as retrospective and prospective analyses.

### **4 Technological approach**

At this point our work is focusing on the development of a system to support the consolidated model for PAM defined in the previous section. Figure 1 shows the interface used to support the process of focalization (currently in Spanish). Our solution is a desktop application which can be synchronized with a Personal Digital Assistant (PDA) and PIM applications (e.g. MS Outlook), as well as producing paper-based reports with lists of activities. Through a floating tool bar, the user can access any of the main processes of PAM. We conceive each of the processes as interrelated but not necessarily interdependent. Consequently, the application is structured so that

people can use any of these processes in the order and with the level of detail that they wish, avoiding with this the imposition of a particular strategy.

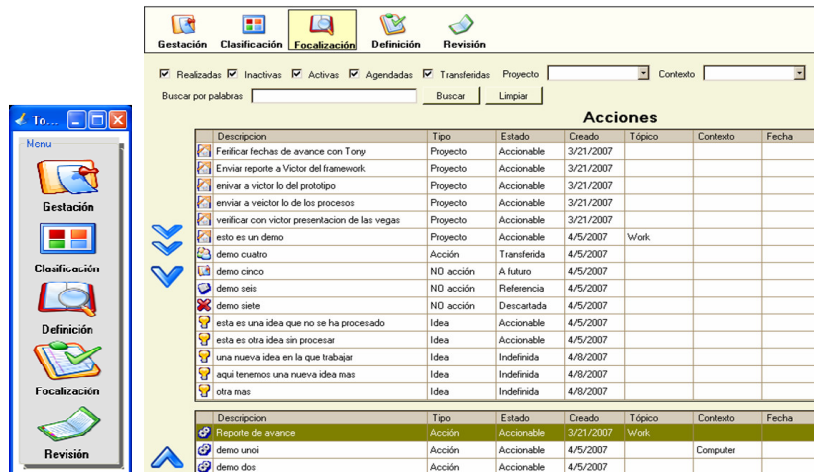


Figure 1. PAM tool: Focalization process

## 5 Future Work

We assume a relationship of mutual dependence between the characteristics of the technology and the practices around its usage. We plan to study the sustained use of our system by knowledge workers for at least two months. Before installing the system, we will provide general training on effective PAM using the tool. Through the analysis of how people use and adapt our tool we aim at contributing to the understanding of multiple activity management in the workplace.

## References

1. Allen, D. (2001): Getting Things Done: The Art of Stress-Free Productivity. New York: Penguin Putnam.
2. Barry, D., Durnell, C., and Carroll, S. (1997): "Navigating the garbage can: How agendas help managers cope with job realities". The Academy of Management Executive. vol. 11, no. 2, pp. 26-42.
3. Bellotti, V., Ducheneaut, N., Howard, M., and Smith, I. "Taking email to task: the design and evaluation of a task management centered email tool." Proc. CHI 2003. ACM Press. pp. 345-352.
4. Covey, S. (1990): "Seven Habits Of Highly Effective People". Edit. Simon & Schuster.
5. González, V. and G. Mark "Managing currents of work: Multi-tasking among multiple collaborations". Proc. ECSCW 2005, Springer. pp. 143-162.
6. Kaptelinin, V. "UMEA: Translating Interaction Histories into Project Context". Proc. CHI 2003. ACM Press. pp. 353-360.