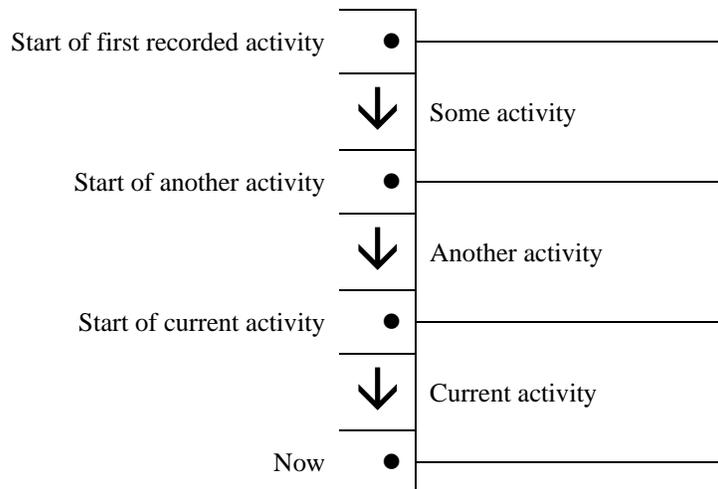# How ActiviTap Views Time and Activities

ActiviTap's features are based on a particular view of the relationships between time, activities, and the events that are recorded in terms of time and activity properties. You can use ActiviTap without reading this explanation, but if you wonder why things are done the way they are, this is the first place to look for an answer.

Time started (at least) at the Big Bang and continues to move on relentlessly until (at least) "now."

Big Bang ●⸺⸺⸺⸺⸺

↓ Passage of time

Now ●⸺⸺⸺⸺⸺
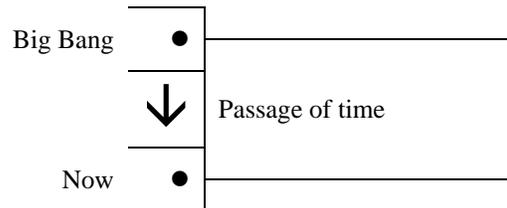
Note that "Big bang" and "Now" are instants, not periods during which time passes or during which activities can take place.
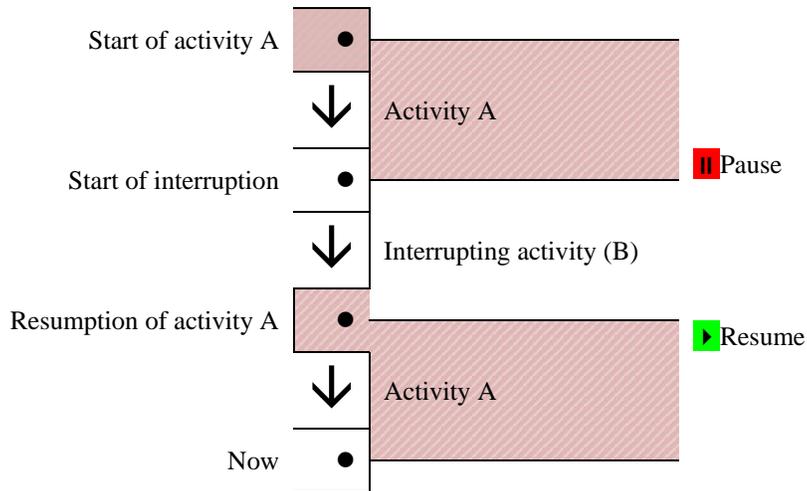
During the passage of time you are always doing something. You decide to describe what you do as different activities; what is a relevant difference is up to you. Though you can do different things at the same time, for recording purposes you need to choose one or describe a combination of things as a distinct activity.

Start of first recorded activity ●⸺⸺⸺⸺⸺

↓ Some activity

Start of another activity ●⸺⸺⸺⸺⸺

↓ Another activity

Start of current activity ●⸺⸺⸺⸺⸺

↓ Current activity

Now ●⸺⸺⸺⸺⸺

Of course activities end too, but *one activity ends only because some other activity has started.* The duration of an activity is determined by the difference between the start of the activity and the start of the next activity. Because "now" is continuously moving onwards, the duration of the current activity is continuously increasing.

Start events partition the passage of time. By knowing the properties of each start event, one can characterize all time (except before the first start), even if the characterization is "irrelevant for timekeeping purposes." For example, someone who goes "off the clock" at the end of the day may record this as starting an activity described as "doing nothing."

Activities are placed in categories to determine whether they are reported on a timesheet (according to the timesheet configuration). The "doing nothing" activity above could be in a "Personal" category, which would be excluded from the timesheet. Within a category, activities are assigned a code for aggregation on timesheets.

Start of activity A ●

↓ Activity A

Start of interruption ● ▮▮ Pause

↓ Interrupting activity (B)

Resumption of activity A ● ▶ Resume

↓ Activity A

Now ●

Most of the things we do, we have done before. Starting something you have done before is a resumption event. ActiviTap exploits the frequency of interruption and resumption to simplify the recording of activity entries. Each previous entry is effectively a menu item that can be tapped to create an entry for the same activity starting "now." If the previous activity is not an exact match, or if "now" is not the correct start time, the entry can be edited to make it accurate enough for the timekeeping needs of the category.

The current activity cannot be *resumed*, since it is already in progress. Instead, it can be tapped to create an entry for a default "off the clock" activity, starting "now," effectively *pausing* the current activity. Like the entries created by resuming, the default entry can also be edited to become an entry for any other activity at any time. Entries created by resuming earlier activities also implicitly pause the current activity. Only one interrupting activity is illustrated, but there can be any number.