

Visualizing patterns of energy use in households – the activity approach

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expanding reality

Aim

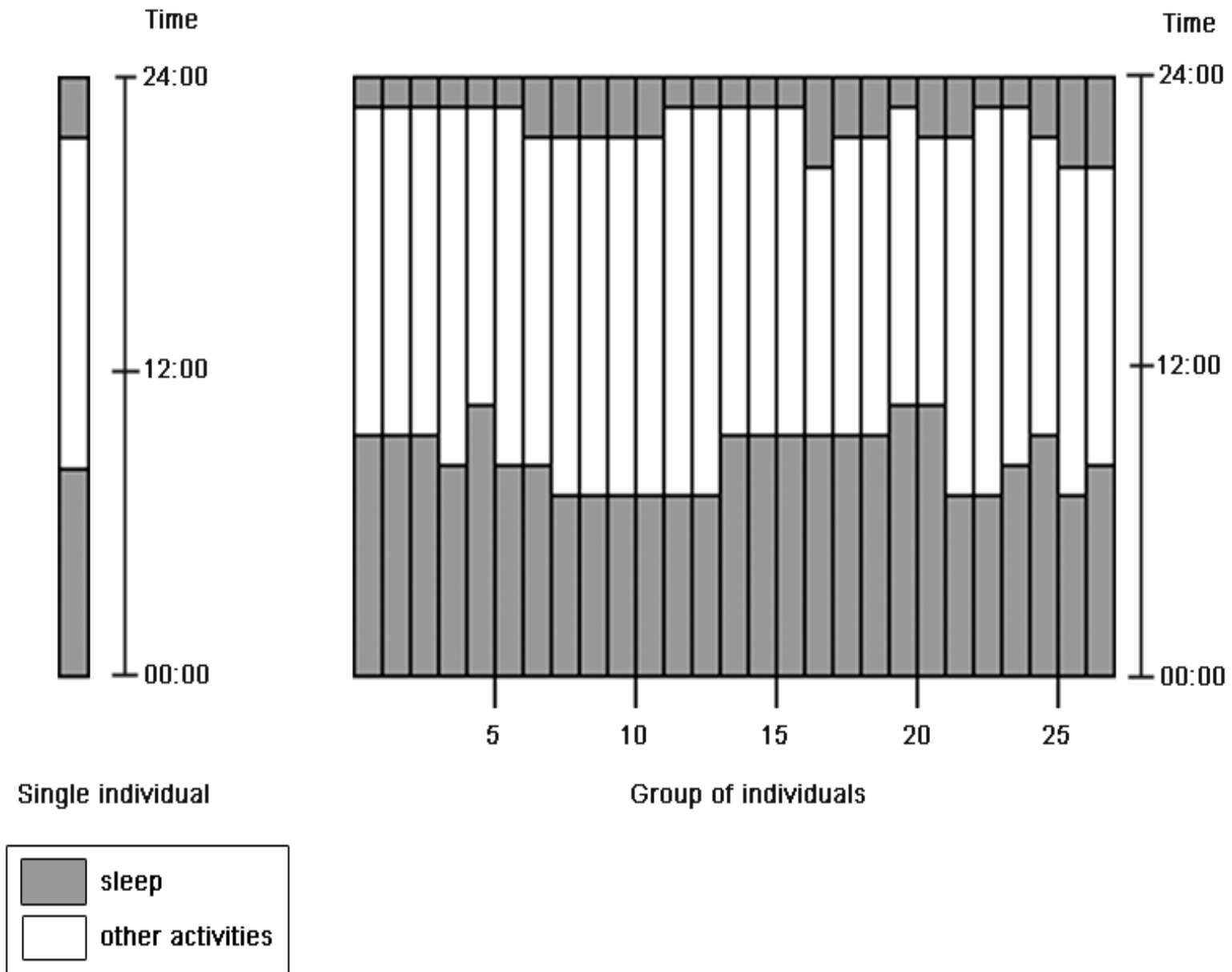
To present an *activity approach* on energy use in households which

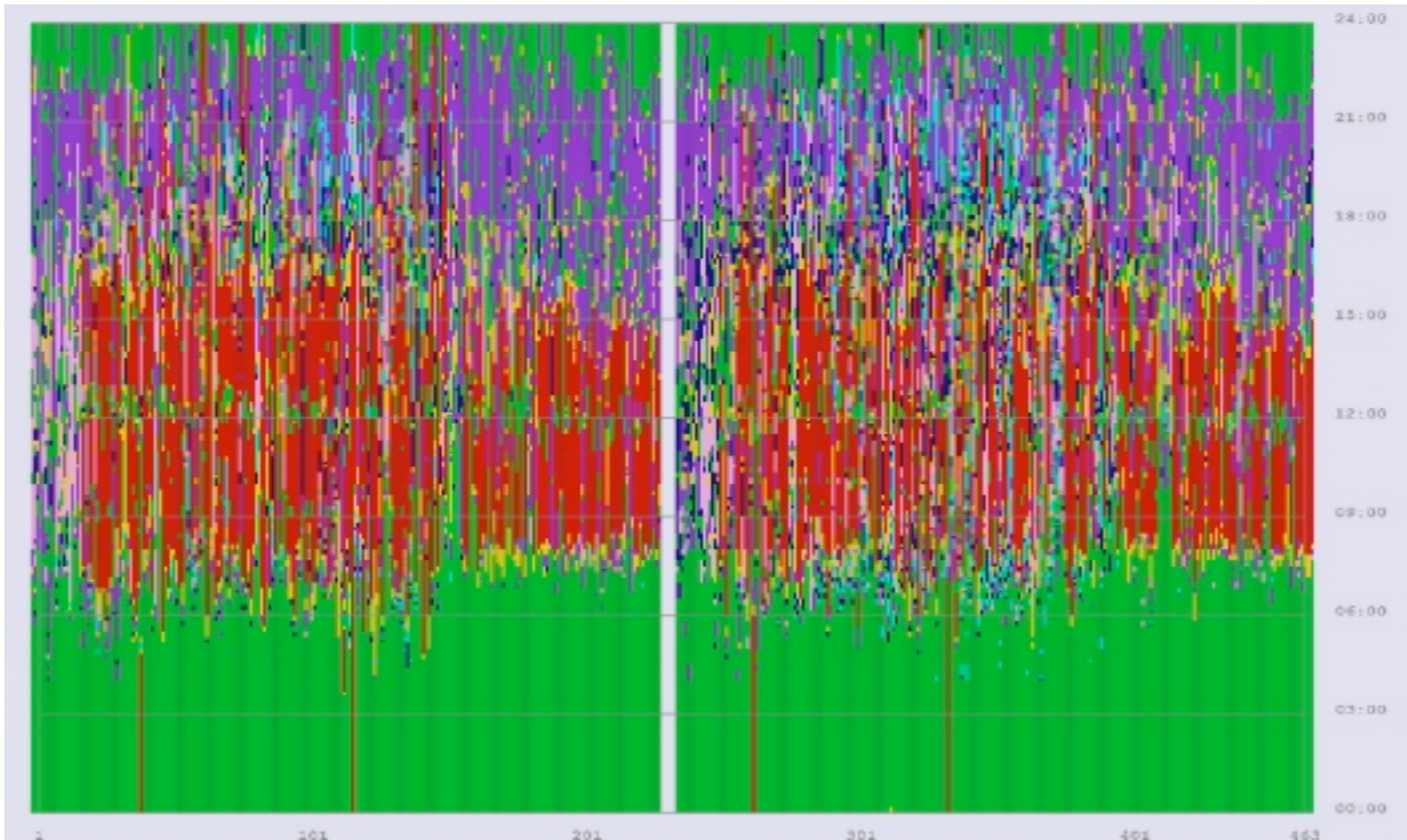
- enables *visualizations* of energy demanding *activities* on aggregate as well as individual household levels
- allows each individual's sequence of activities performed in the course of the day and the duration of each activity, to be displayed in the context of all other individuals in the population or in the individual household
- includes methods of calculating the amount of energy that these activity patterns require

Methodology

- Time-geography emphasising activities, individuals in a population/group, the 24 hour time period, and place
- Aggregate level: time-diaries from recurrent national time use surveys (Statistics Sweden)
- Household level: time-diaries, interviews
- Coding and then compiling in the software VISUAL-TimePAcTS (Time, Place, Activities, Technologies, Social relations): what activity, when (revealing for how long), where, together with whom/what technology

Basic principle for visualization showing the basic structure of human daily life:
sleep – other activities - sleep





+85

Men

10 +85

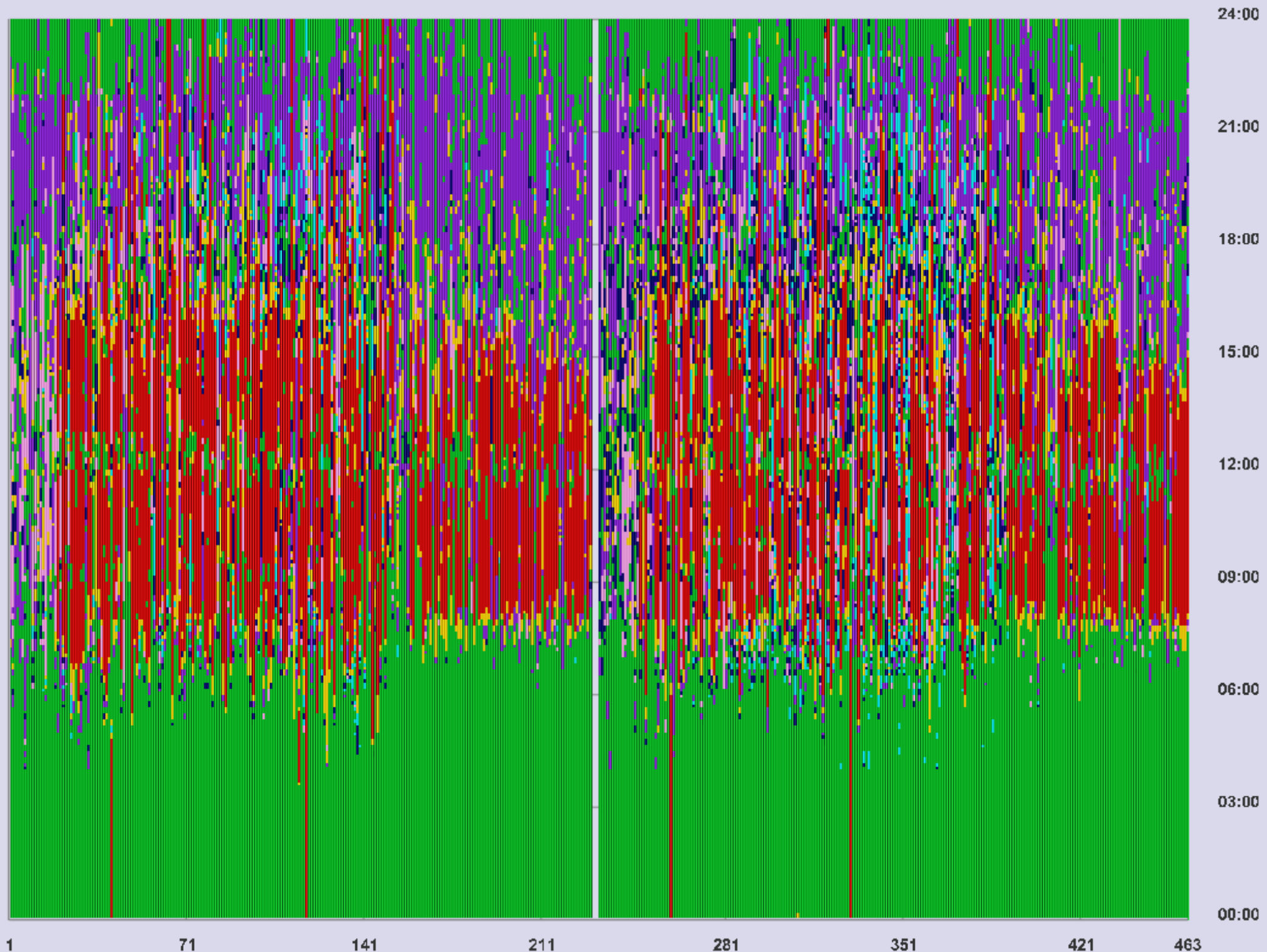
(N=463)

Women

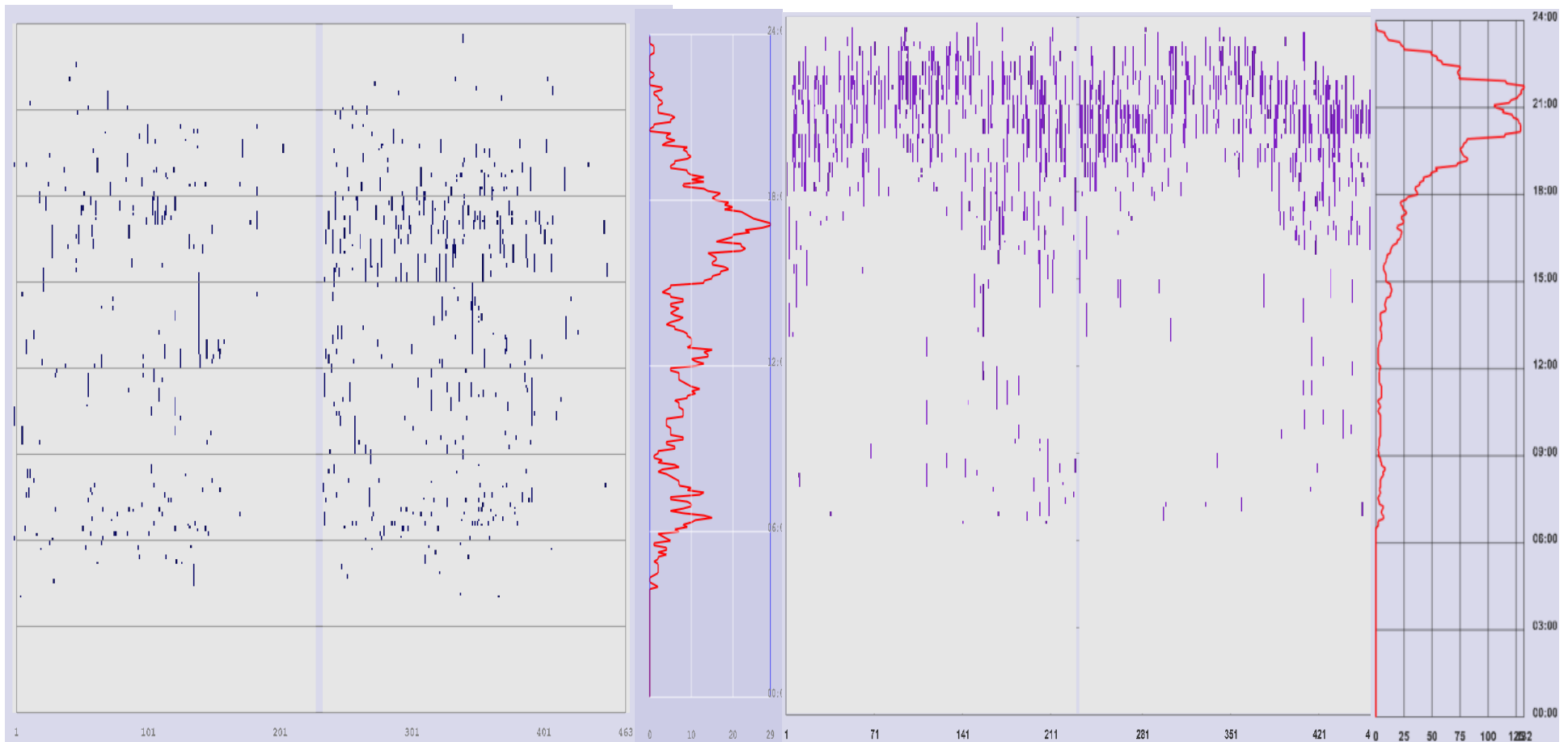
10

Activity categories colour legend

- | | | | | |
|--|---|--|---|--|
| ■ Care for oneself | ■ Care for others | ■ Household care | ■ Reflection/recreation | ■ Travel |
| ■ Procure and prepare food | ■ Employed work/school | | | |



Energy consuming activities (N=463)



+85

Men

10

+85

Women

10 Frequency

+85

Men

10

+85

Women

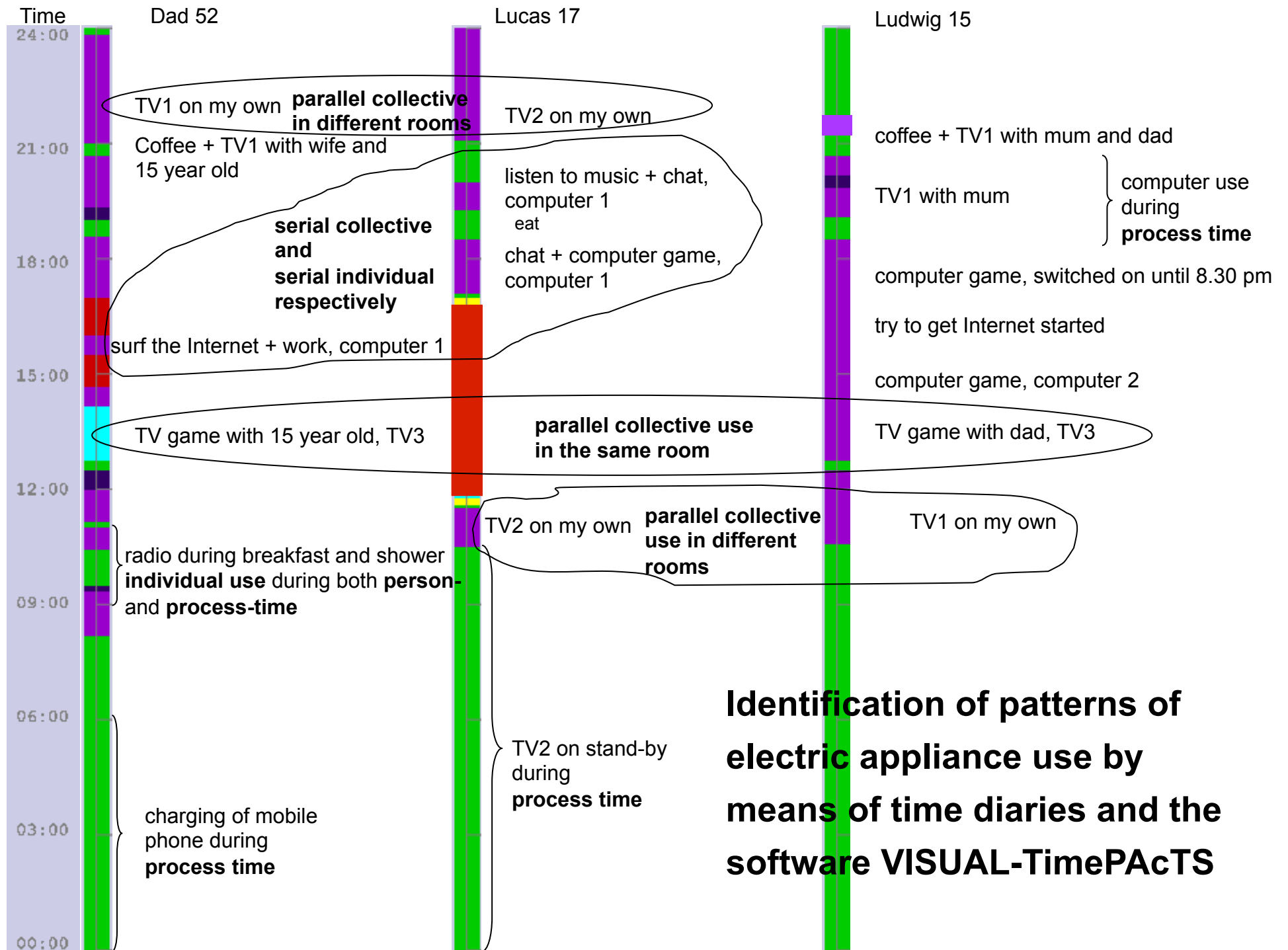
10 Frequency

Preparing meals activities

Watching TV activities

Household level: Basic patterns of electric appliance use

	Individual use	Collective use
The simple patterns	one appliance is used by one person	one appliance is used by two or more persons at the same time
Serial	the same appliance is used by one person at different occasions during one day	the same appliance is used by different persons at different occasions during one day
Parallel	two or more appliances are used at the same time by one person in the same or different rooms	two or more appliances are used at the same time by two or more persons in the same or different rooms
Background use	appliances that have to be switched on all of the time in order to function and uphold a certain service, e.g. refrigerators and freezers, clock radios	
Person-time	Appliance in use <i>with</i> the presence of a person, e.g. watching TV	
Process-time	Appliance in use <i>without</i> the presence of a person, e.g. charging	



Thank you!

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