Spectrum: A Visual Analytics Tool to Explore Logs

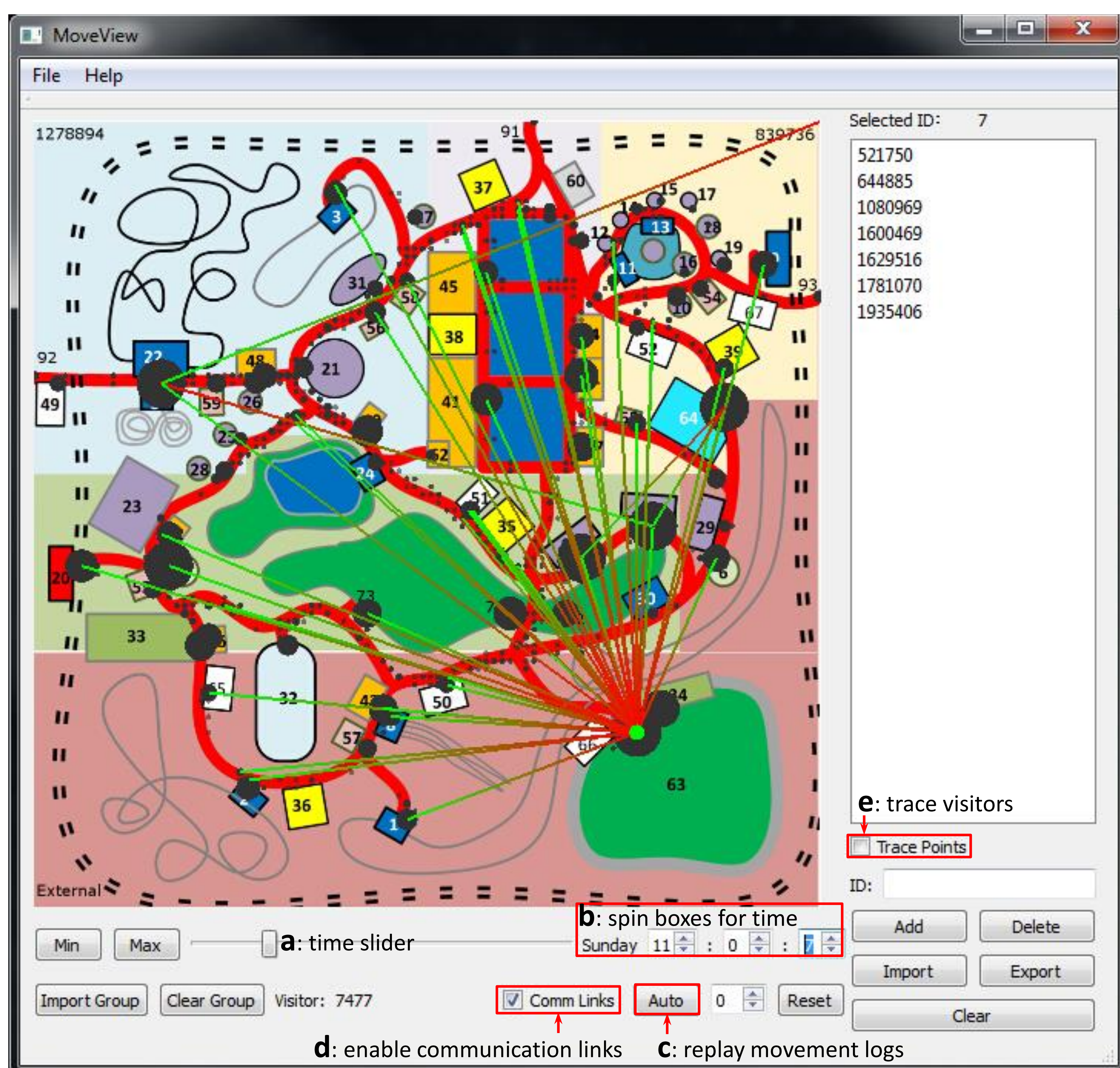## VAST Challenge 2015 Mini-Challenge 1, 2 and Grand Challenge

Ji Wang, Junpeng Wang and Chris North

Introduction

- We present a visual analytics tool, **Spectrum**, to analyze the movement and communication log data from VAST Challenge 2015.
- **Spectrum** is able to:
  - Provides an intuitive overview of the log data
  - Discover movement patterns from a large number of log records.
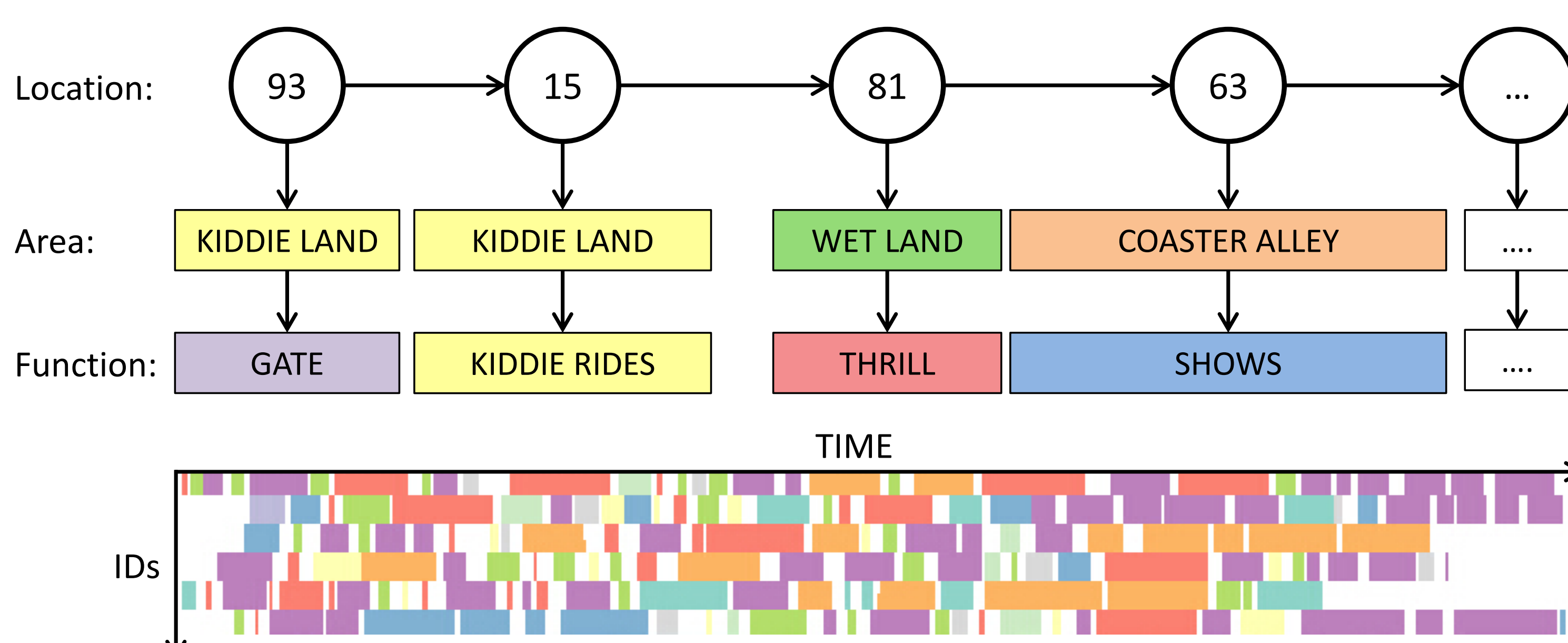
Movement View

- **Movement View** provides an intuitive overview of the movement and communication logs.
- It supports: Movement Replay, Interactive Visual Analysis and Dynamic Communication Links.

e: trace visitors
b: spin boxes for time
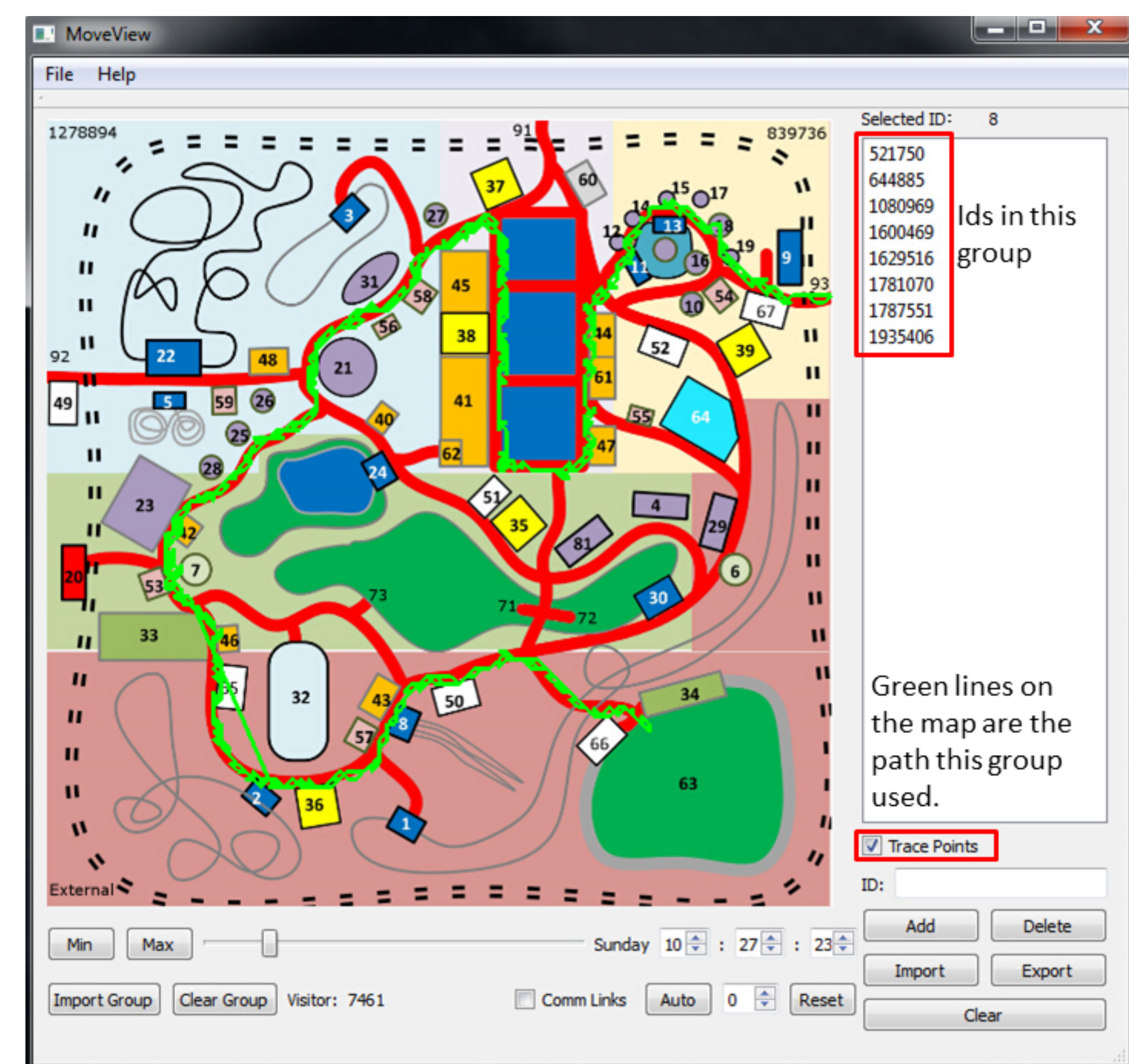d: enable communication links   c: replay movement logs

Spectrum View

- **Spectrum View** gives an overview of all visitors' activities in a timeline. In the timeline, visitors accessed a sequence of locations and stayed varying durations in these locations.
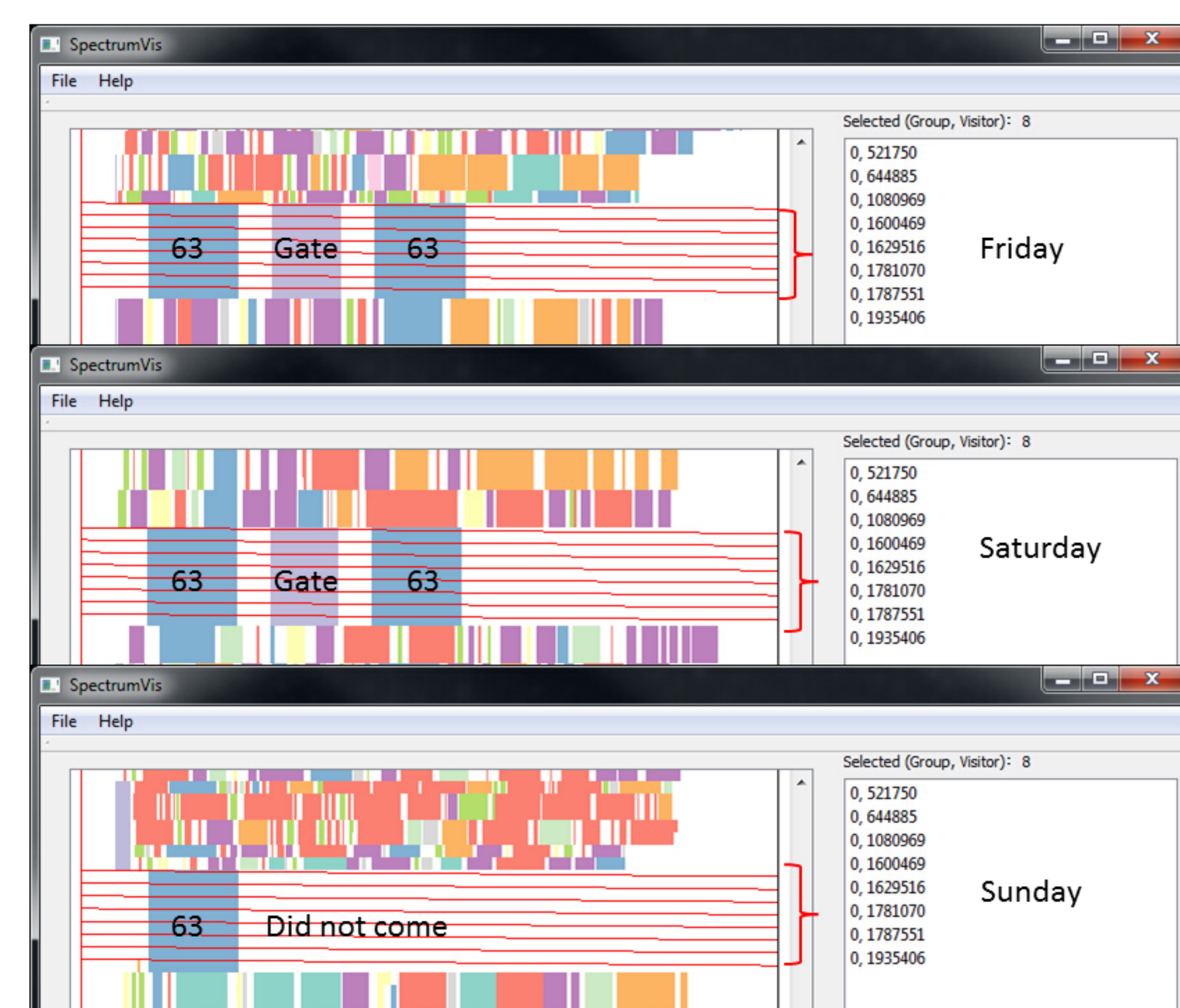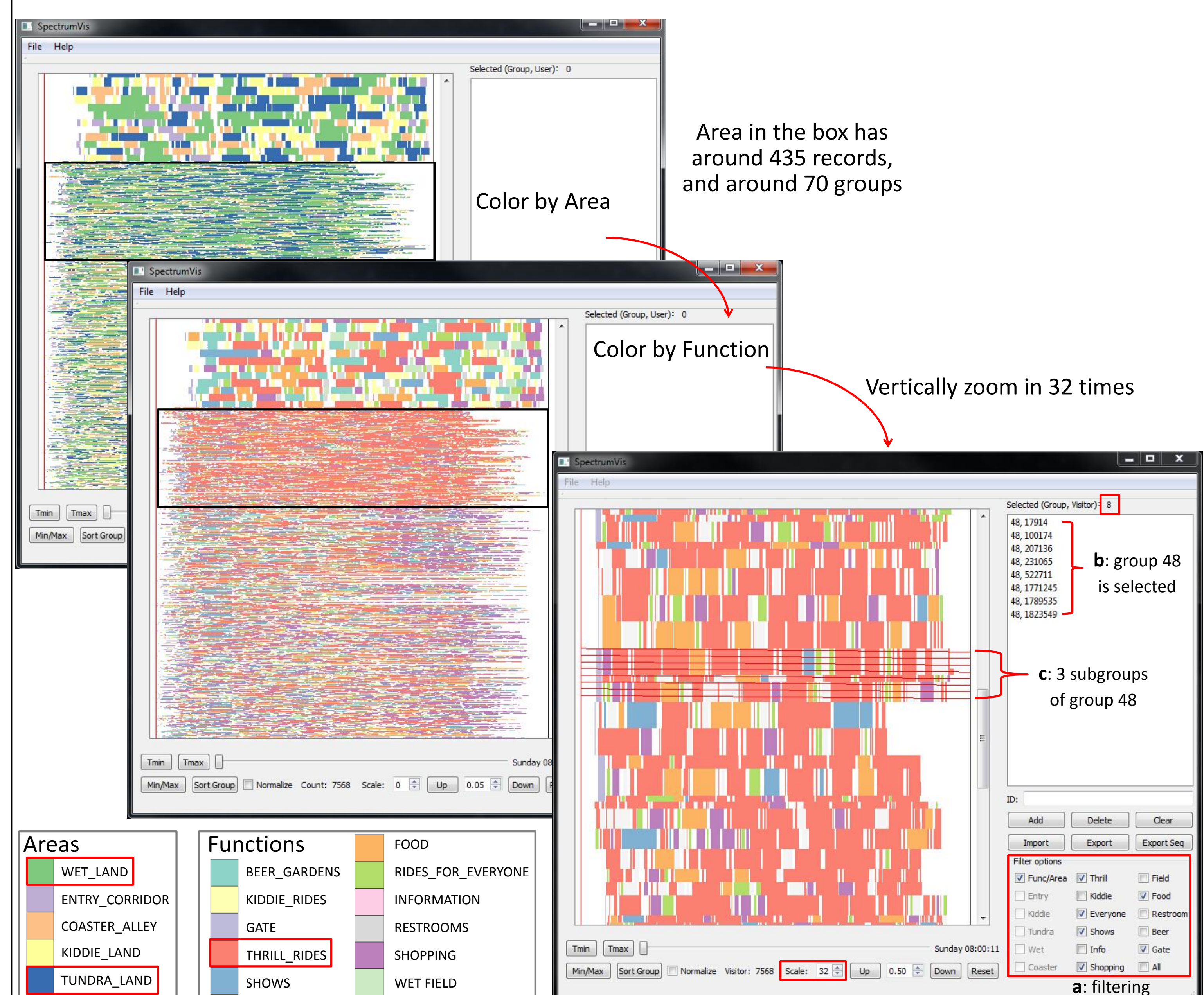

Preliminary Findings

- We found *Scott Jones* appeared at Location 63 (Grinosaurus Stage) for five times in the three-day weekend.

- Scott spent around two hours per stay at this location and was not interested in other locations.

- Scott and his eight staffs always followed the same routes in the park. But his second show on Sunday was canceled.

- We also found there were eight selected visitors in (b) separated into three subgroups (c) after they entered into the park. These eight visitors were probably friends with different preferences for the park facilities.

Area in the box has around 435 records, and around 70 groups

Color by Area

Color by Function

Vertically zoom in 32 times

b: group 48 is selected

c: 3 subgroups of group 48

a: filtering

Areas		Functions	
WET_LAND		BEER_GARDENS	FOOD
ENTRY_CORRIDOR		KIDDIE_RIDES	RIDES_FOR_EVERYONE
COASTER_ALLEY		GATE	INFORMATION
KIDDIE_LAND		RESTROOMS	RESTROOMS
TUNDRA_LAND		THRILL_RIDES	SHOPPING
		SHOWS	WET_FIELD

- Please check http://bit.ly/201IQC5 for more findings.

chci center for human computer interaction virginiatech

VirginiaTech
Invent the Future