



VISIR/HIVE-DB

Create Global Report

Data Input

PLEASE START BY IMPORTING A LOG FILE THROUGH THE LEFT PANEL

Log File

Browse... No file selected

Observation Items (optional)

Browse... No file selected

Assessment Milestones (optional)

Browse... No file selected

First logged date

Last logged date

# VISIR/HIVE-DB User Guide

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# VISIR/HIVE-DB

- VISIR/HIVE-DB is a teacher-facing learning analytics dashboard to explore log data from VISIR or HIVE.

The screenshot displays the VISIR/HIVE-DB dashboard. At the top, there is a navigation bar with the text "VISIR/HIVE-DB" on the left and a "Create Global Report" button on the right. A dark sidebar on the left contains a menu with the following items: "Data Input" (with a home icon), "Global Results", "Circuit-based Analysis", "User-specific Results", "Work Indicators", "Data Download", and "Help". The main content area is titled "Data Input" and features three file selection sections: "Log File", "Observation Items (optional)", and "Assessment Milestones (optional)". Each section has a "Browse..." button and a "No file selected" status. To the right of these sections, a message reads "PLEASE START BY IMPORTING A LOG FILE THROUGH THE LEFT PANEL". Below this message are four blue buttons: "Users", "Actions", "First logged date", and "Last logged date". At the bottom of the main content area, there are two informational text boxes: "Observation items to be loaded... use the control on the left if needed." and "Assessment milestones to be loaded... use the control on the left if needed. Observation items, if available, will be used for evaluation."

# User Guide Index

- VISIR/HIVE-DB installation
- Data input
- Exploring global results
- Analyzing the circuits
- Supporting specific students
- Mapping students' work
- Downloading a report and/or student's data
- Getting help

- **VISIR/HIVE-DB installation**
- Data input
- Exploring global results
- Analyzing the circuits
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- Getting help

# VISIR/HIVE-DB installation

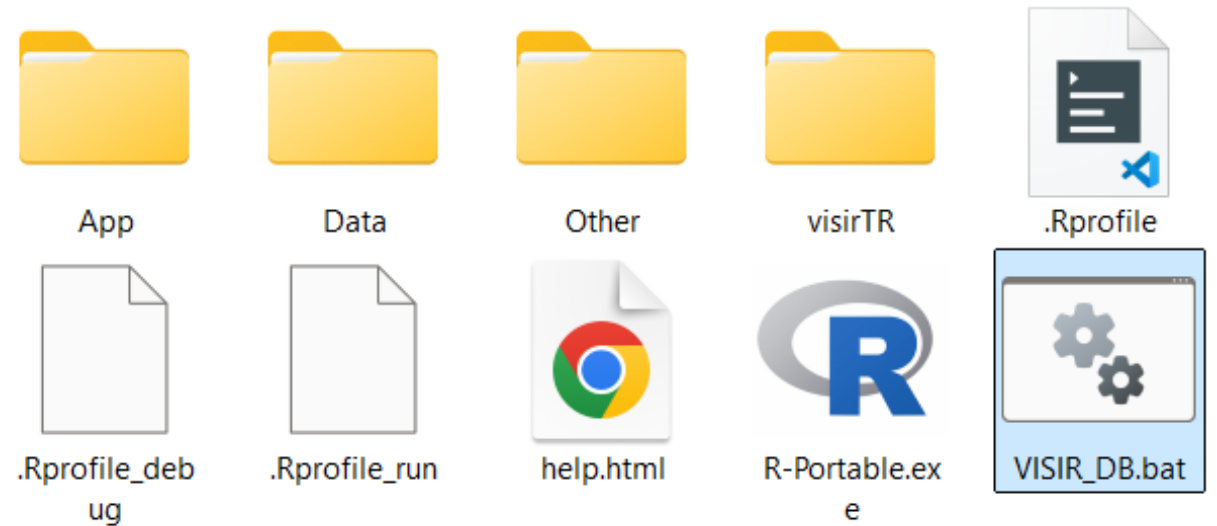
# VISIR/HIVE-DB installation

- Go to <http://asistembe2.iqs.edu/visirtr/index.htm>.
- Download the current portable version.
- Unzip the file.
  - It includes R-portable, VISIR/HIVE-DB and some example data files.



# VISIR/HIVE-DB installation

- Launch **VISIR\_DB** or **VISIR\_DB.bat**. The dashboard may take some seconds to be fully available.



- VISIR/HIVE-DB installation
- **Data input**
- Exploring global results
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# Data input

## Data Input

Global Results &lt;

Circuit-based Analysis &lt;

User-specific Results &lt;

Work Indicators &lt;

Data Download &lt;

Help &lt;

## Data Input

## Log File

Browse...

No file selected

## Observation Items (optional)

Browse...

No file selected

## Assessment Milestones (optional)

Browse...

No file selected

PLEASE START BY IMPORTING A LOG FILE THROUGH THE LEFT PANEL

--

Users

--

Actions

--

First logged date

--

Last logged date

*Observation items to be loaded... use the control on the left if needed.**Assessment milestones to be loaded... use the control on the left if needed. Observation items, if available, will be used for evaluation.*

## Data Input

Global Results &lt;

Circuit-based Analysis &lt;

User-specific Results &lt;

Work Indicators &lt;

Data Download &lt;

Help &lt;

## Data Input

## Log File

Browse...

No file selected

## Observation Items (optional)

Browse...

No file selected

## Assessment Milestones (optional)

Browse...

No file selected

PLEASE START BY IMPORTING A LOG FILE THROUGH THE LEFT PANEL

--

Users

--

Actions

--

First logged date

--

Last logged date

*Observation items to be loaded... use the control on the left if needed.**Assessment milestones to be loaded... use the control on the left if needed. Observation items, if available, will be used for evaluation.*

Sample data files are available in the folder **visirTR/data** of **VISIR/HIVE-DB**.

## Data Input

Global Results &lt;

Circuit-based Analysis &lt;

User-specific Results &lt;

Work Indicators &lt;

Data Download &lt;

Help &lt;

## Data Input

## Log File

Browse... 2014S1\_LogData\_Sample.csv

Upload complete

## Observation Items (optional)

Browse... No file selected

## Assessment Milestones (optional)

Browse... No file selected

PLEASE START BY IMPORTING A LOG FILE THROUGH THE LEFT PANEL

--  
Users--  
Actions--  
First logged date--  
Last logged date*Observation items to be loaded... use the control on the left if needed.**Assessment milestones to be loaded... use the control on the left if needed. Observation items, if available, will be used for evaluation.*

Students' log data (**2014S1\_LogData\_Sample.csv**) are loading.

## Data Input

Global Results &lt;

Circuit-based Analysis &lt;

User-specific Results &lt;

Work Indicators &lt;

Data Download &lt;

Help &lt;

## Data Input

## Log File

Browse... 2014S1\_LogData\_Sample.csv

Upload complete

## Observation Items (optional)

Browse... No file selected

## Assessment Milestones (optional)

Browse... No file selected

Log file loaded, details are shown below...

17

Users

1925

Actions

2014-02-11

First logged date

2014-02-27

Last logged date

*Observation items to be loaded... use the control on the left if needed.**Assessment milestones to be loaded... use the control on the left if needed. Observation items, if available, will be used for evaluation.*

Students' log data (**2014S1\_LogData\_Sample.csv**) are now loaded.

## Data Input

Global Results &lt;

Circuit-based Analysis &lt;

User-specific Results &lt;

Work Indicators &lt;

Data Download &lt;

Help &lt;

## Data Input

## Log File

Browse... 2014S1\_LogData\_Sample.csv

Upload complete

## Observation Items (optional)

Browse... No file selected

## Assessment Milestones

Browse... No file selected

Log file loaded, details are shown below...

17

Users

1925

Actions

2014-02-11

First logged date

2014-02-27

Last logged date

*Observation items to be loaded... use the control on the left if needed.**Assessment milestones to be loaded... use the control on the left if needed. Observation items, if available, will be used for evaluation.*

Although we will load working indicators, the results on the three first sections are already available once the log file is loaded.

## Data Input

Global Results &lt;

Circuit-based Analysis &lt;

User-specific Results &lt;

Work Indicators &lt;

Data Download &lt;

Help &lt;

## Data Input

## Log File

Browse... 2014S1\_LogData\_Sample.csv

Load complete

## Observation Items (optional)

Browse... No file selected

## Assessment Milestones (optional)

Browse... No file selected

Log file loaded, details are shown below...

17

Users

1925

Actions

2014-02-11

First logged date

2014-02-27

Last logged date

*Observation items to be loaded... use the control on the left if needed.**Assessment milestones to be loaded... use the control on the left if needed. Observation items, if available, will be used for evaluation.*

Sample data files are available in the folder **visirTR/data** of **VISIR/HIVE-DB**.

## Data Input

Global Results &lt;

Circuit-based Analysis &lt;

User-specific Results &lt;

Work Indicators &lt;

Data Download &lt;

Help &lt;

## Data Input

## Log File

Browse... 2014S1\_LogData\_Sample.csv

Upload complete

## Observation Items (optional)

Browse... 2014S1\_ObservationItems.txt

Upload complete

## Assessment Milestones (optional)

Browse... No file selected

Log file loaded, details are shown below...

17

Users

1925

Actions

2014-02-11

First logged date

2014-02-27

Last logged date

Read 8 observation items

P02M01, P02M02, P02M03, P02M04, P02M05, P02M06, P02M07, P02M08

*Assessment milestones to be loaded... use the control on the left if needed. Observation items, if available, will be used for evaluation.*

Observation items (**2014S1\_ObservationItems.txt**) are loaded.

Data Input

Global Results &lt;

Circuit-based Analysis &lt;

User-specific Results &lt;

Work Indicators &lt;

Data Download &lt;

Help

## Data Input

## Log File

Browse... 2014S1\_LogData\_Sample.csv

Upload complete

## Observation Items (optional)

Browse... 2014S1\_ObservationItems.txt

Upload complete

## Assessment Milestones (optional)

Browse... No file selected

Log file loaded, details are shown below...

17

Users

1925

Actions

2014-02-11

First logged date

2014-02-27

Last logged date

Read 8 observation items

P02M01, P02M02, P02M03, P02M04, P02M05, P02M06, P02M07, P02M08

*Assessment milestones to be loaded... use the control on the left if needed. Observation items, if available, will be used for evaluation.*

Once observation items are loaded, the analyses related to working indicators can be explored.

## Data Input

Global Results &lt;

Circuit-based Analysis &lt;

User-specific Results &lt;

Work Indicators &lt;

Data Download &lt;

Help &lt;

## Data Input

## Log File

Browse... 2014S1\_LogData\_Sample.csv

Upload complete

## Observation Items (optional)

Browse... 2014S1\_ObservationItems.txt

Upload complete

## Assessment Milestones (optional)

Browse... No file selected

Log file loaded, details are shown below...

17

Users

1925

Actions

2014-02-11

First logged date

2014-02-27

Last logged date

Read 8 observation items

P02M01, P02M02, P02M03, P02M04, P02M05, P02M06, P02M07, P02M08

*Assessment milestones to be loaded... use the control on the left if needed. Observation items, if available, will be used for evaluation.*

## Data Input

Global Results &lt;

Circuit-based Analysis &lt;

User-specific Results &lt;

Work Indicators &lt;

Data Download &lt;

Help &lt;

## Data Input

## Log File

Browse... 2014S1\_LogData\_Sample.csv

Upload complete

## Observation Items (optional)

Browse... 2014S1\_ObservationItems.txt

Upload complete

## Assessment Milestones (optional)

Browse... 2014S1\_AssessmentMilestones.txt

Upload complete

Log file loaded, details are shown below...

17

Users

1925

Actions

2014-02-11

First logged date

2014-02-27

Last logged date

Read 8 observation items

P02M01, P02M02, P02M03, P02M04, P02M05, P02M06, P02M07, P02M08

Read 3 assessment milestones

EVP01, EVP02, EVP03

Assessment milestones  
**(2014S1\_AssessmentMilestones.txt)** are loaded.

- VISIR/HIVE-DB installation
- Data input
- **Exploring global results**
- Analyzing the circuits
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# Exploring global results

Data Input

Global Results

Circuit-based Analysis

User-specific Results

Work Indicators

Data Download

Help

## Data Input

## Log File

Browse... 2014S1\_LogData\_Sample.csv

Upload complete

## Observation Items (optional)

Browse... 2014S1\_ObservationItems.txt

Upload complete

## Assessment Milestones (optional)

Browse... 2014S1\_AssessmentMilestones.txt

Upload complete

Log file loaded, details are shown below...

17

Users

1925

Actions

2014-02-11

First logged date

2014-02-27

Last logged date

Read 8 observation items

P02M01, P02M02, P02M03, P02M04, P02M05, P02M06, P02M07, P02M08

Read 3 assessment milestones

EVP01, EVP02, EVP03

Data Input

Global Results ▾

» Time

» Experiments

» Experiments vs Time

Circuit-based Analysis &lt;

User-specific Results &lt;

Work Indicators &lt;

Data Download &lt;

Help &lt;

## Data Input

## Log File

Browse...

2014S1\_LogData\_Sample.csv

Upload complete

## Observation Items (optional)

Browse...

2014S1\_ObservationItems.txt

Upload complete

## Assessment Milestones (optional)

Browse...

AssessmentMilestones.txt

Upload complete

Log file loaded, details are shown below...

17

Users

1925

Actions

2014-02-11

First logged date

2014-02-27

Last logged date

Read 8 observation items

P02M01, P02M02, P02M03, P02M04, P02M05, P02M06, P02M07, P02M08

Read 3 assessment milestones

EVP01, EVP02, EVP03

On clicking, the *Global Results* section expands into three blocks of visualizations (*Time*, *Experiments* & *Experiments vs Time*).

Data Input

Global Results

» Time

» Experiments

» Experiments vs Time

Circuit-based Analysis &lt;

User-specific Results &lt;

Work Indicators &lt;

Data Download &lt;

Help &lt;

## Data Input

## Log File

Browse...

2014S1\_LogData\_Sample.csv

Upload complete

## Observation Items (optional)

Browse...

2014S1\_ObservationItems.txt

Upload complete

## Assessment Milestones (optional)

Browse...

2014S1\_AssessmentMilestones.txt

Upload complete

Log file loaded, details are shown below...

17

Users

1925

Actions

2014-02-11

First logged date

2014-02-27

Last logged date

Read 8 observation items

P02M01, P02M02, P02M03, P02M04, P02M05, P02M06, P02M07, P02M08

Read 3 assessment milestones

EVP01, EVP02, EVP03

Data Input

Global Results &lt;

&gt;&gt; Time

&gt;&gt; Experiments

&gt;&gt; Experiments vs Time

Circuit-based Analysis &lt;

User-specific Results &lt;

Work Indicators &lt;

Data Download &lt;

Help &lt;

Time Distribution

Time per Date

Time per User and Date

**1.77**

Minimum, among users, in h

**2.45**

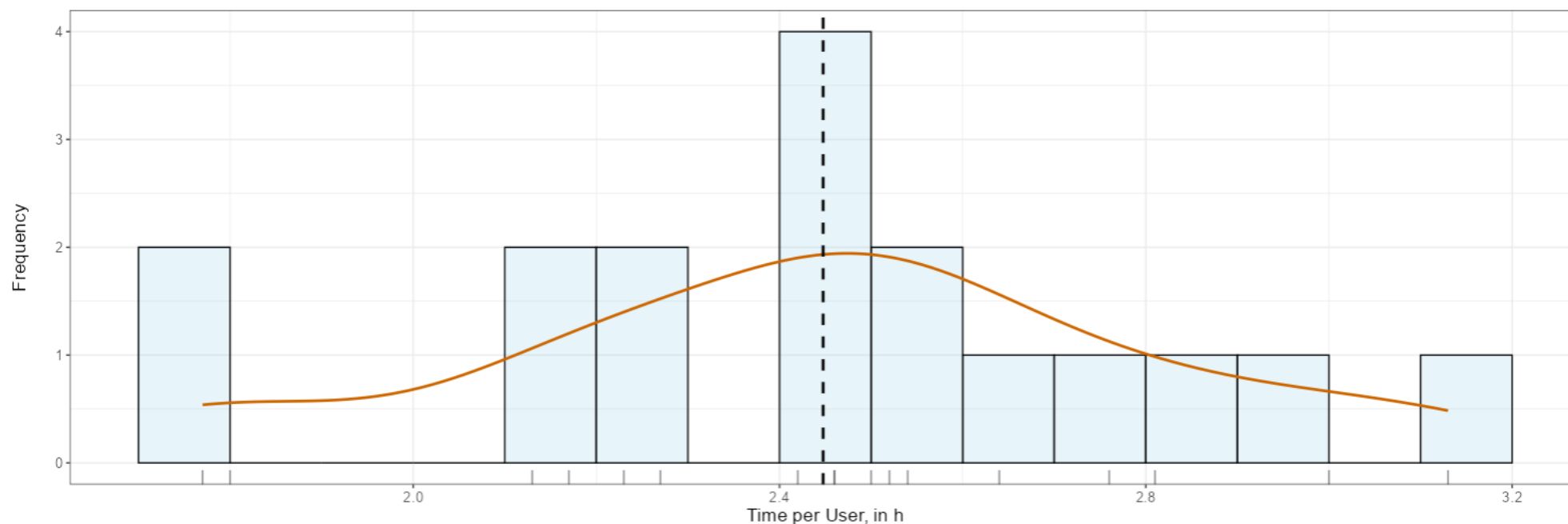
Mean, among users, in h

**3.13**

Maximum, among users, in h

**41.61**

Total time, in h



This chart shows the distribution of time of work of the VISIR users (idle times larger than 15 minutes are discounted). It allows estimating the usual completion of the VISIR activities. Average time of work (2.45 h) is presented as a dashed vertical line. For the pool of users, time of work goes from 1.77 h to 3.13 h.

Data Input

Global Results &lt;

&gt;&gt; Time

&gt;&gt; Experiments

&gt;&gt; Experiments vs Time

Circuit-based Analysis &lt;

User-specific Results &lt;

Work Indicators &lt;

Data Download &lt;

Help &lt;

Time Distribution

Time per Date

Time per User and Date

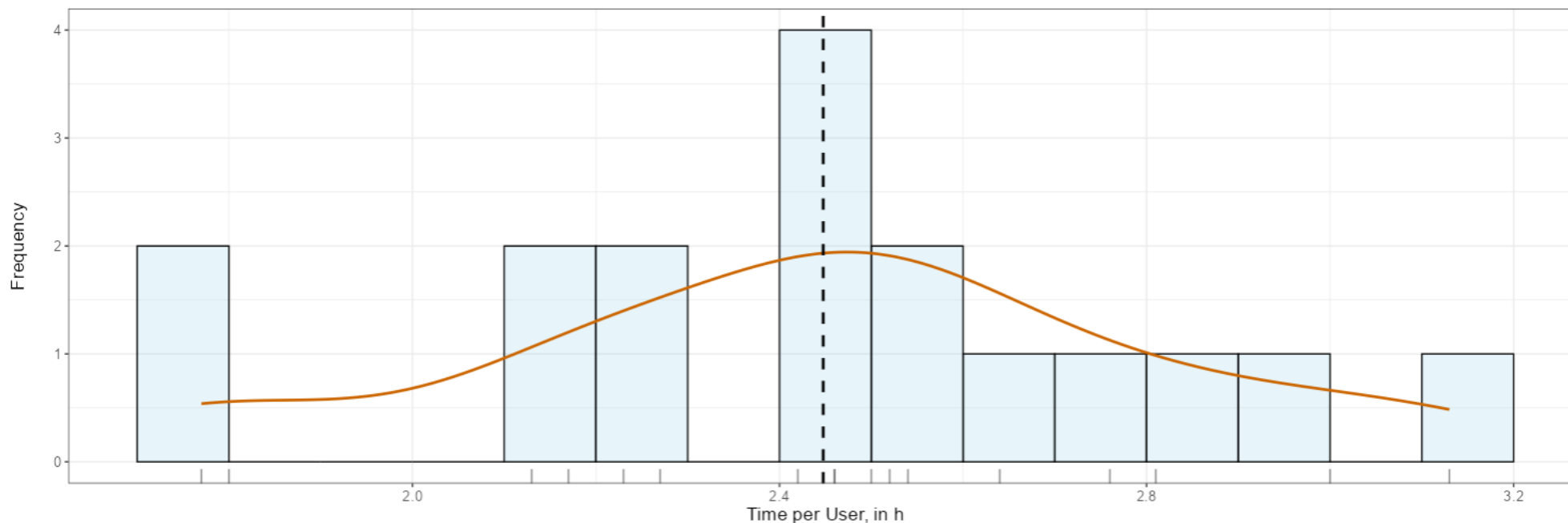
Use these tabs to select among the different analyses.

**1.77**

Minimum, among users, in h

**2.45**

Mean, among users, in h



This chart shows the distribution of time of work of the VISIR users (idle times larger than 15 minutes are discounted). It allows estimating the usual completion of the VISIR activities. Average time of work (2.45 h) is presented as a dashed vertical line. For the pool of users, time of work goes from 1.77 h to 3.13 h.

Data Input

Global Results &lt;

&gt;&gt; Time

&gt;&gt; Experiments

&gt;&gt; Experiments vs Time

Circuit-based Analysis &lt;

User-specific Results &lt;

Work Indicators &lt;

Data Download &lt;

Help &lt;

Time Distribution

Time per Date

Time per User and Date

**1.77**

Minimum, among users, in h

**2.45**

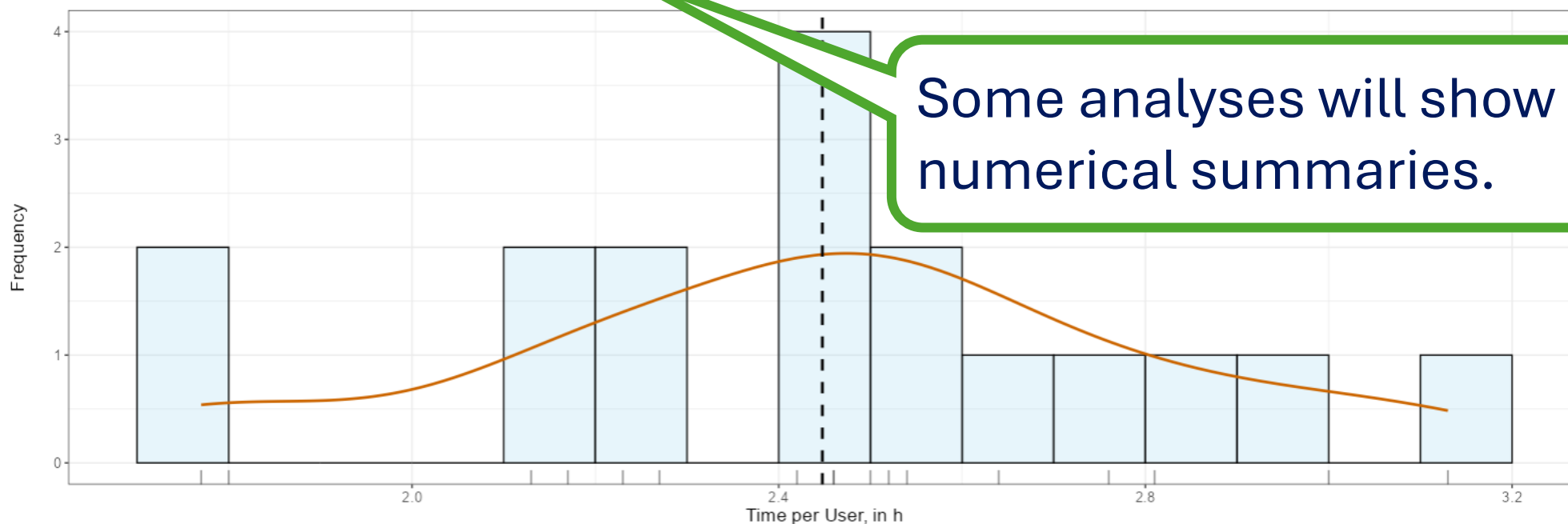
Mean, among users, in h

**3.13**

Maximum, among users, in h

**41.61**

Total time, in h



This chart shows the distribution of time of work of the VISIR users (idle times larger than 15 minutes are discounted). It allows estimating the usual completion of the VISIR activities. Average time of work (2.45 h) is presented as a dashed vertical line. For the pool of users, time of work goes from 1.77 h to 3.13 h.

Data Input

Global Results &lt;

&gt;&gt; Time

&gt;&gt; Experiments

&gt;&gt; Experiments vs Time

Circuit-based Analysis &lt;

User-specific Results &lt;

Work Indicators &lt;

Data Download &lt;

Help &lt;

Time Distribution

Time per Date

Time per User and Date

**1.77**

Minimum, among users, in h

**2.45**

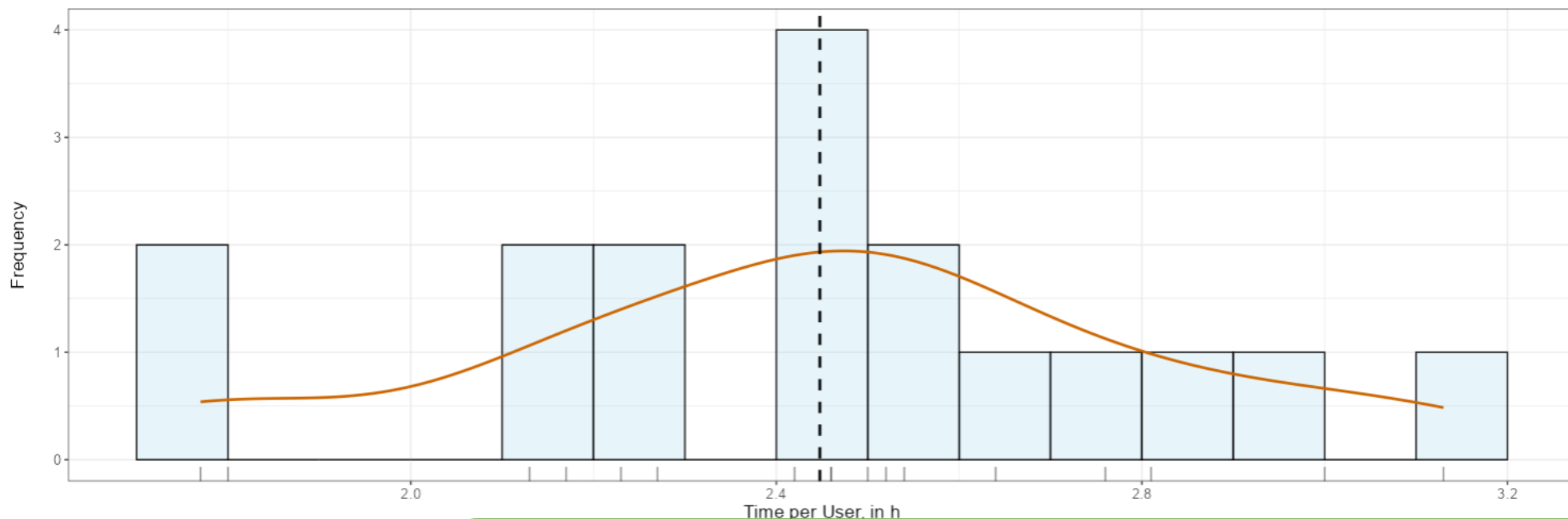
Mean, among users, in h

**3.13**

Maximum, among users, in h

**41.61**

Total time, in h



This chart shows the distribution of time of work of activities. Average time of work (2.45 h) is present

Charts will also be available in many cases. A short description will help interpret the results.

Data Input

Global Results &lt;

&gt;&gt; Time

&gt;&gt; Experiments

&gt;&gt; Experiments vs Time

Circuit-based Analysis &lt;

User-specific Results &lt;

Work Indicators &lt;

Data Download &lt;

Help &lt;

Time Distribution

Time per Date

Time per User and Date

**1.77**

Minimum, among users, in h

**2.45**

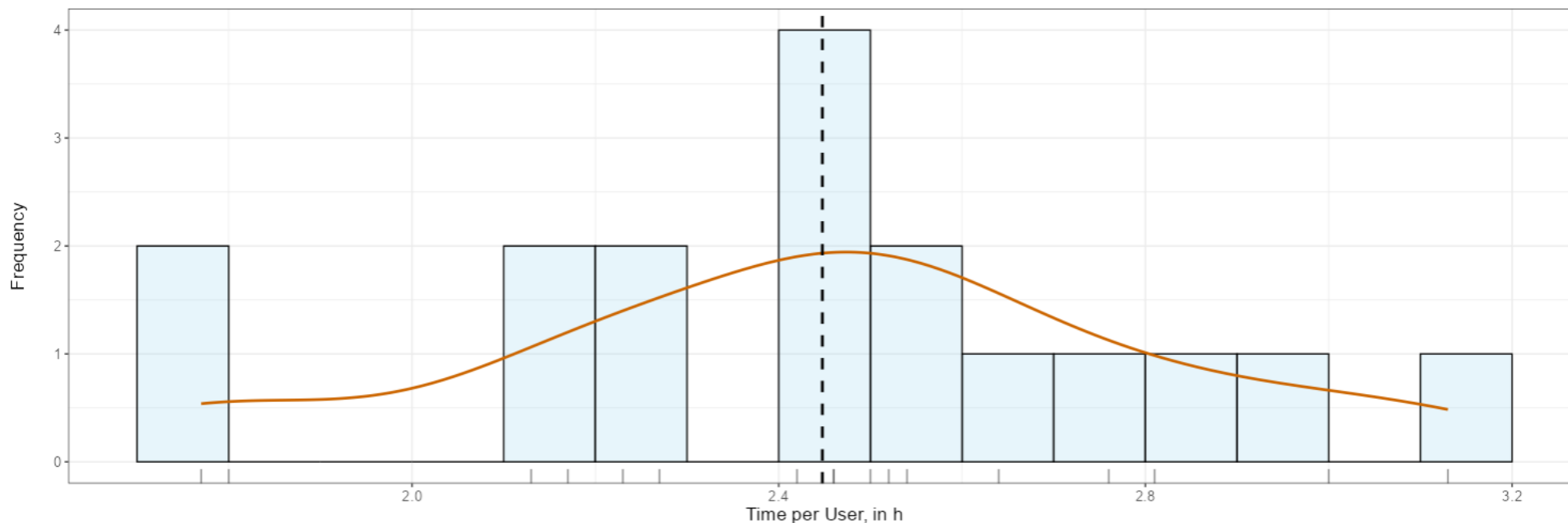
Mean, among users, in h

**3.13**

Maximum, among users, in h

**41.61**

Total time, in h



This chart shows the distribution of time of work of the VISIR users (idle times larger than 15 minutes are discounted). It allows estimating the usual completion of the VISIR activities. Average time of work (2.45 h) is presented as a dashed vertical line. For the pool of users, time of work goes from 1.77 h to 3.13 h.

Data Input

Global Results &lt;

&gt;&gt; Time

&gt; Experiments

&gt; Experiments vs Time

Circuit-based Analysis &lt;

User-specific Results &lt;

Work Indicators &lt;

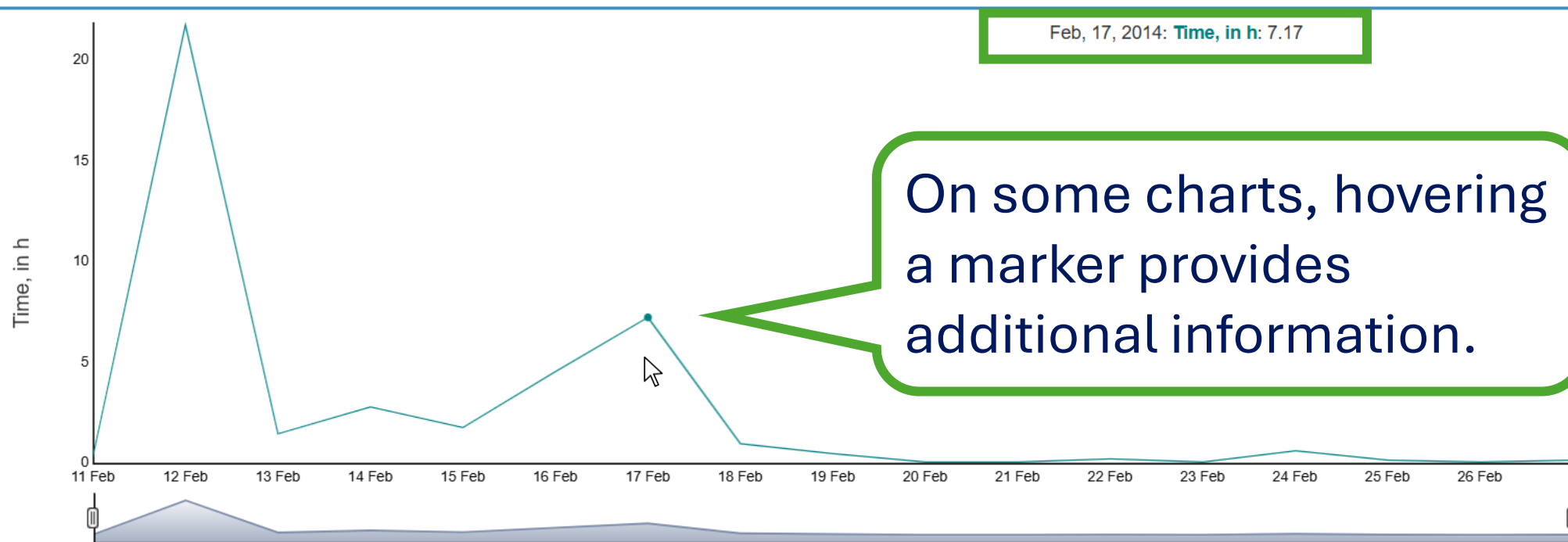
Data Download &lt;

Help &lt;

Time Distribution

Time per Date

Time per User and Date



This chart shows total time of work per date. Time frame can be adjusted by using the slider at the bottom of the chart.

Data Input

Global Results &lt;

» Time

» Experiments

» Experiments vs Time

Circuit-based Analysis &lt;

User-specific Results &lt;

Work Indicators &lt;

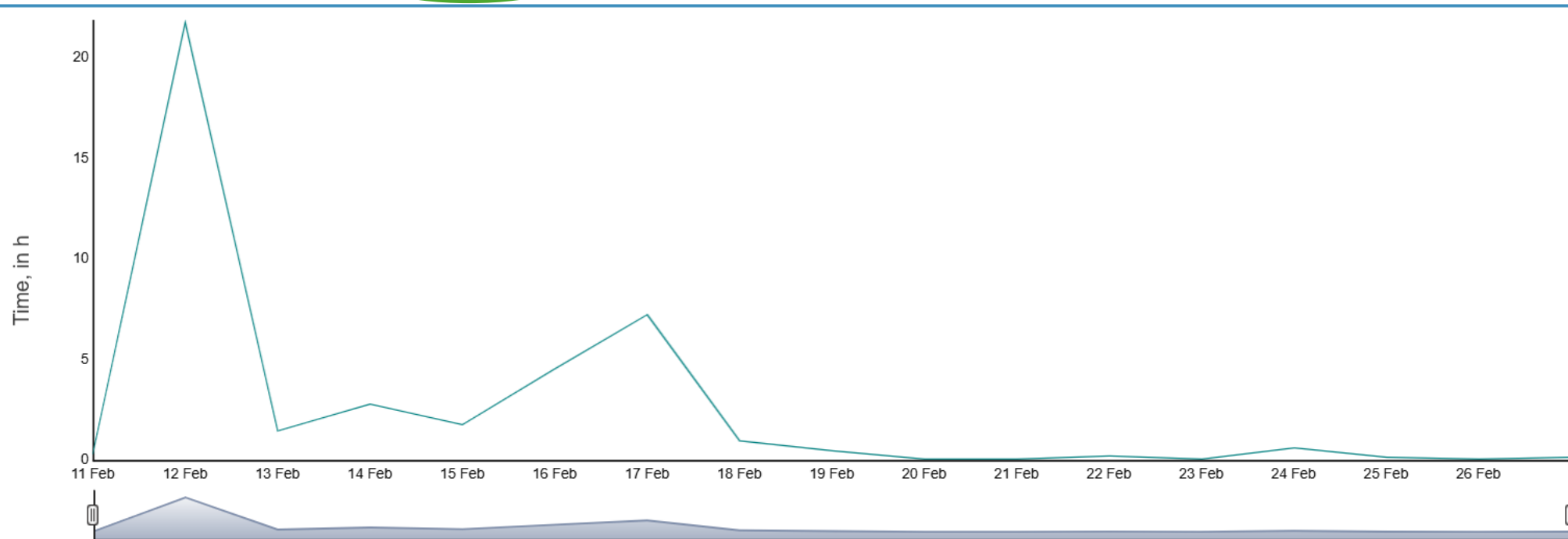
Data Download &lt;

Help &lt;

Time Distribution

Time per Date

Time per User and Date



This chart shows total time of work per date. Time frame can be adjusted by using the slider at the bottom of the chart.

Data Input

Global Results &lt;

&gt;&gt; Time

&gt;&gt; Experiments

&gt;&gt; Experiments vs Time

Circuit-based Analysis &lt;

User-specific Results &lt;

Work Indicators &lt;

Data Download &lt;

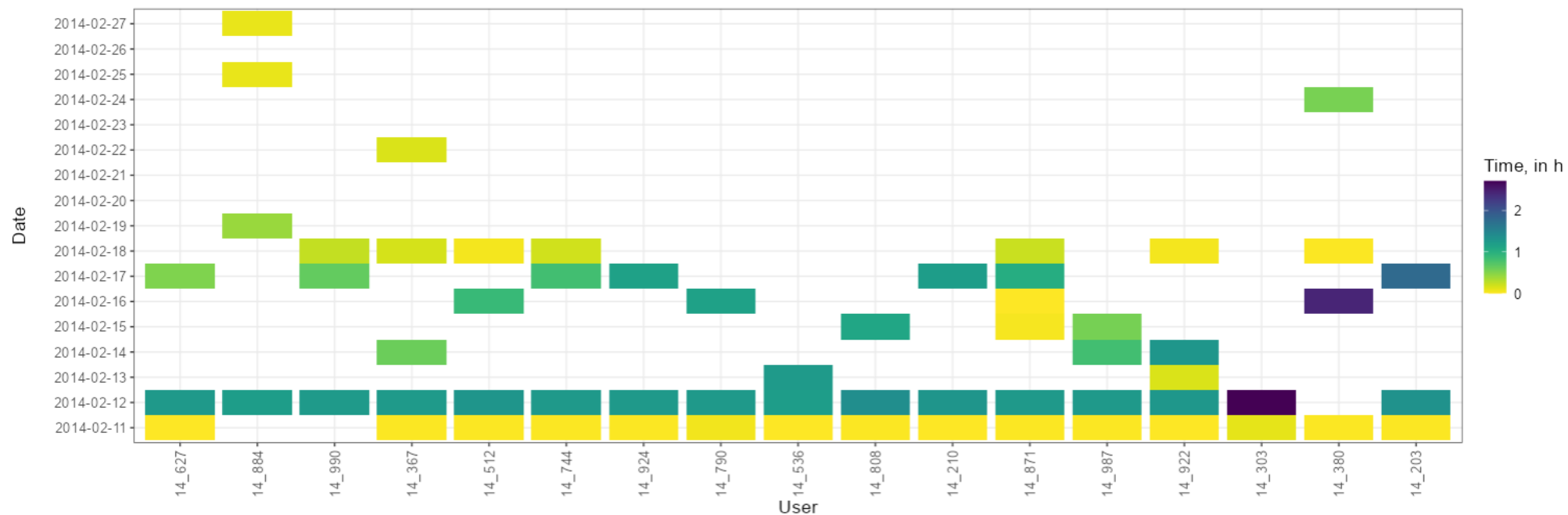
Help &lt;

Time Distribution

Time per Date

Time per User and Date

Place your mouse over a data point to see user, date and time dedicated.



This chart shows the time of work per user and date. Darker colors indicate larger amounts of working time. The highest peak of work intensity can be seen on 2014-02-12 where user 14\_303 spent 163 min using VISIR.

Data Input

Global Results

Time

Experiments

Experiments vs time

Circuit-based Analysis

User-specific Results

Work Indicators

Data Download

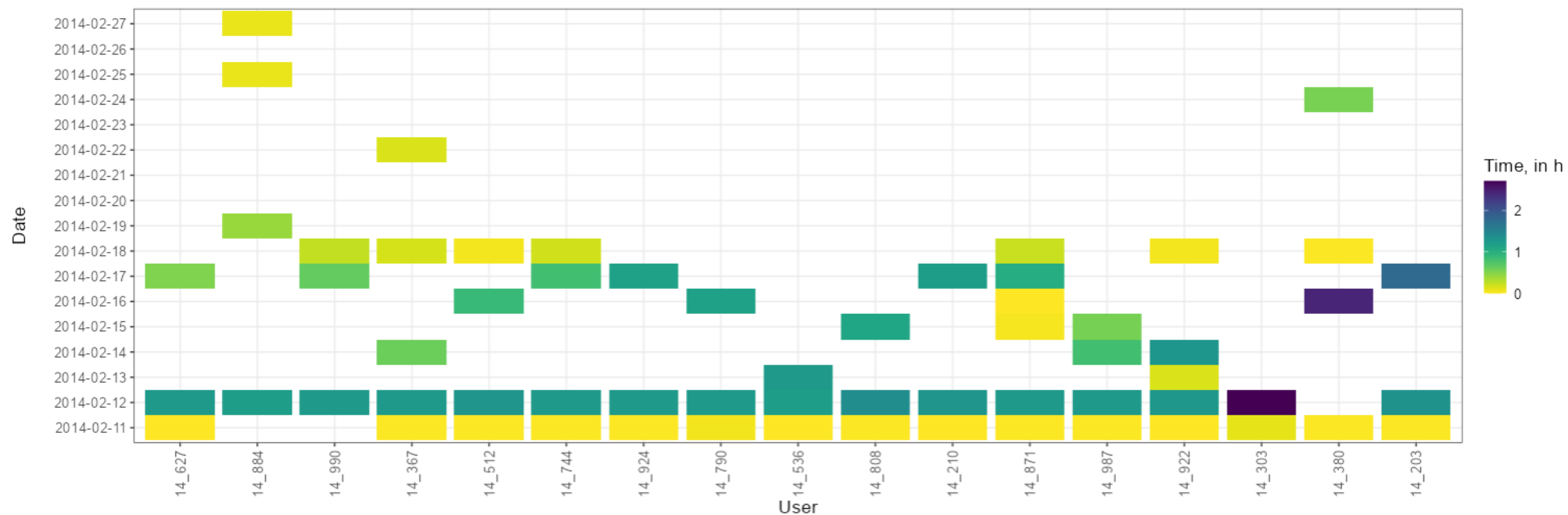
Help

Time Distribution

Time per Date

Time per User and Date

Place your mouse over a data point to see user, date and time dedicated.



This chart shows the time of work per user and date. Darker colors indicate larger amounts of working time. The highest peak of work intensity can be seen on 2014-02-12 where user 14\_303 spent 163 min using VISIR.

Data Input

Global Results &lt;

&gt;&gt; Time

&gt;&gt; Experiments

&gt;&gt; Experiments vs Time

Circuit-based Analysis &lt;

User-specific Results &lt;

Work Indicators &lt;

Data Download &lt;

Help &lt;

Experiments Distribution

Experiments per Date

Experiments per User and Date

Experimental Timelines

Unique Circuits Distribution

**46**

Minimum, among users

**79.88**

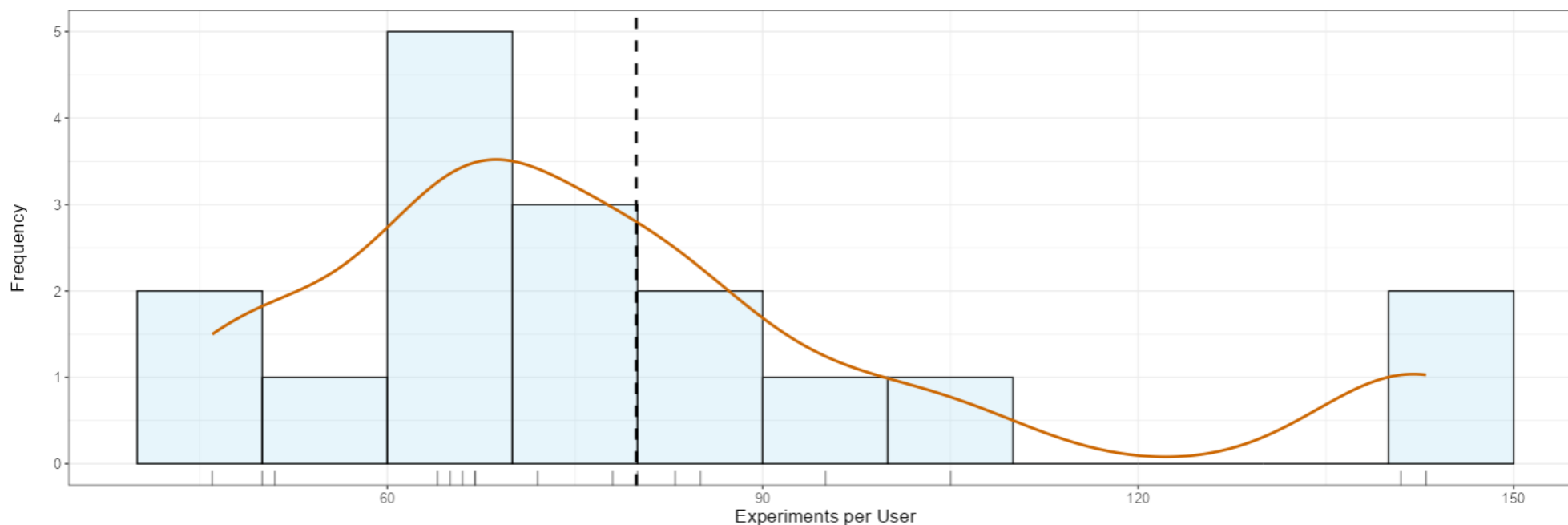
Mean, among users

**143**

Maximum, among users

**1358**

Total number of experiments



This chart shows the distribution of the number of experiments per user. Average number of experiments (79.88) is presented as a dashed vertical line. For the pool of users, the number of experiments goes from 46 to 143.

Data Input

Global Results &lt;

&gt;&gt; Time

&gt;&gt; Experiments

&gt;&gt; Experiments vs Time

Circuit-based Analysis &lt;

User-specific Results &lt;

Work Indicators &lt;

Data Download &lt;

Help &lt;

Experiments Distribution

Experiments per Date

Experiments per User and Date

Experimental Timelines

Unique Circuits Distribution

46

Minimum, among users

79.88

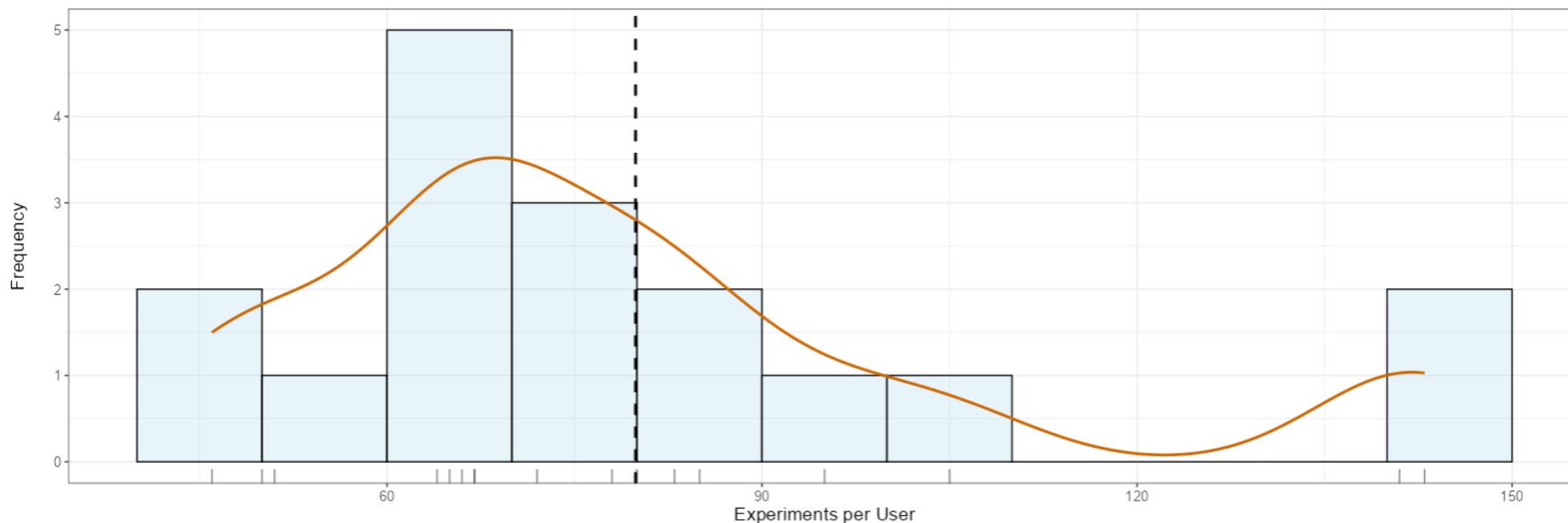
Mean, among users

143

Maximum, among users

1358

Total number of experiments



This chart shows the distribution of the number of experiments per user. Average number of experiments (79.88) is presented as a dashed vertical line. For the pool of users, the number of experiments goes from 46 to 143.

Data Input

Global Results &lt;

&gt;&gt; Time

&gt;&gt; Experiments

&gt;&gt; Experiments vs Time

Circuit-based Analysis &lt;

User-specific Results &lt;

Work Indicators &lt;

Data Download &lt;

Help &lt;

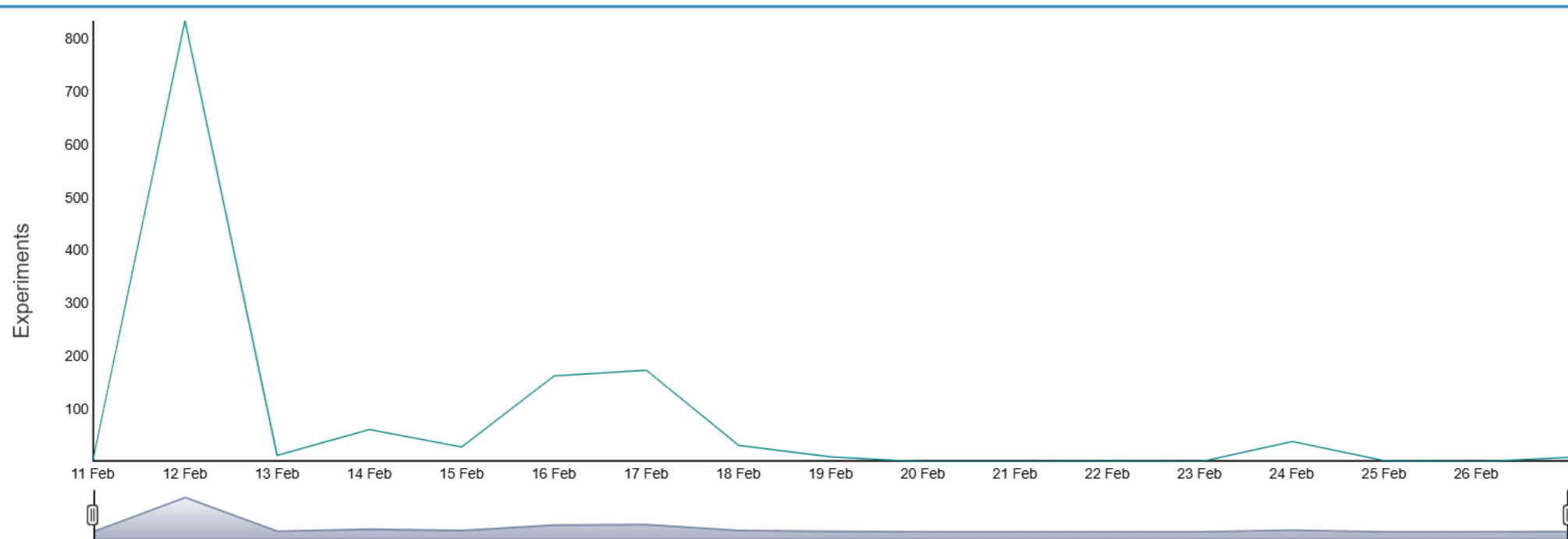
Experiments Distribution

Experiments per Date

Experiments per User and Date

Experimental Timelines

Unique Circuits Distribution



This chart shows the number of experiments per date. Time frame can be adjusted by using the slider at the bottom of the chart.

Data Input

Global Results &lt;

&gt;&gt; Time

&gt;&gt; Experiments

&gt;&gt; Experiments vs Time

Circuit-based Analysis &lt;

User-specific Results &lt;

Work Indicators &lt;

Data Download &lt;

Help &lt;

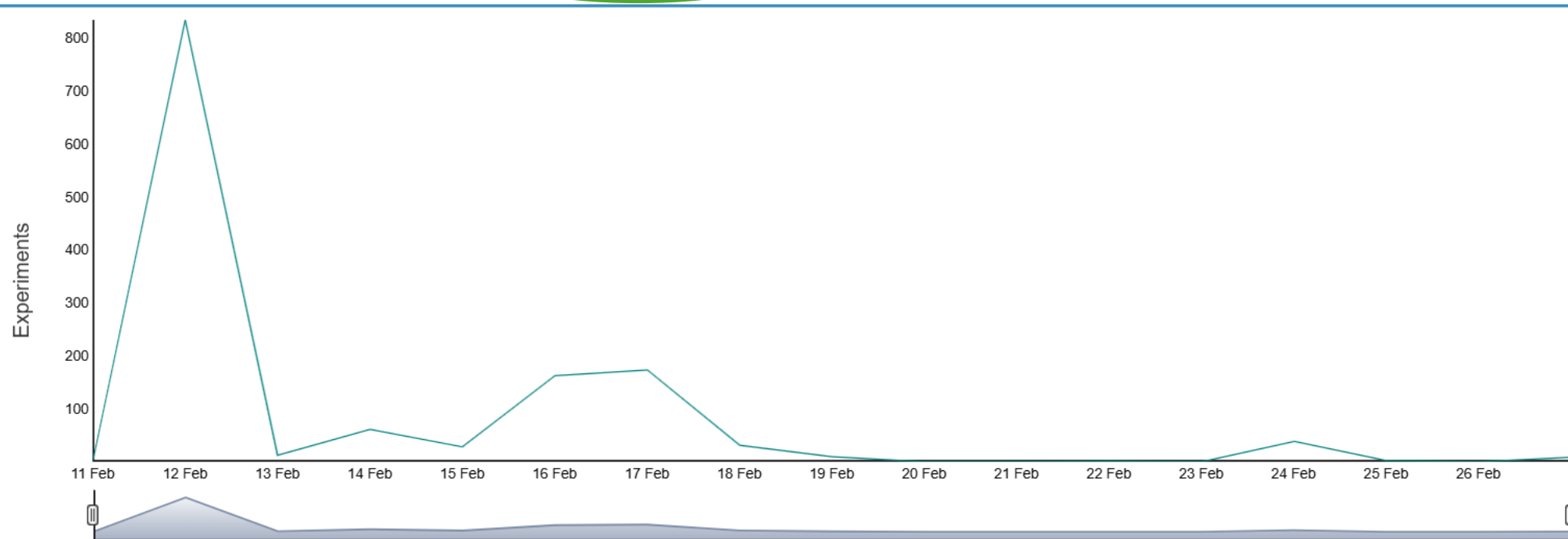
Experiments Distribution

Experiments per Date

Experiments per User and Date

Experimental Timelines

Unique Circuits Distribution



This chart shows the number of experiments per date. Time frame can be adjusted by using the slider at the bottom of the chart.

Data Input

Global Results &lt;

&gt;&gt; Time

&gt;&gt; Experiments

&gt;&gt; Experiments vs Time

Circuit-based Analysis &lt;

User-specific Results &lt;

Work Indicators &lt;

Data Download &lt;

Help &lt;

Experiments Distribution

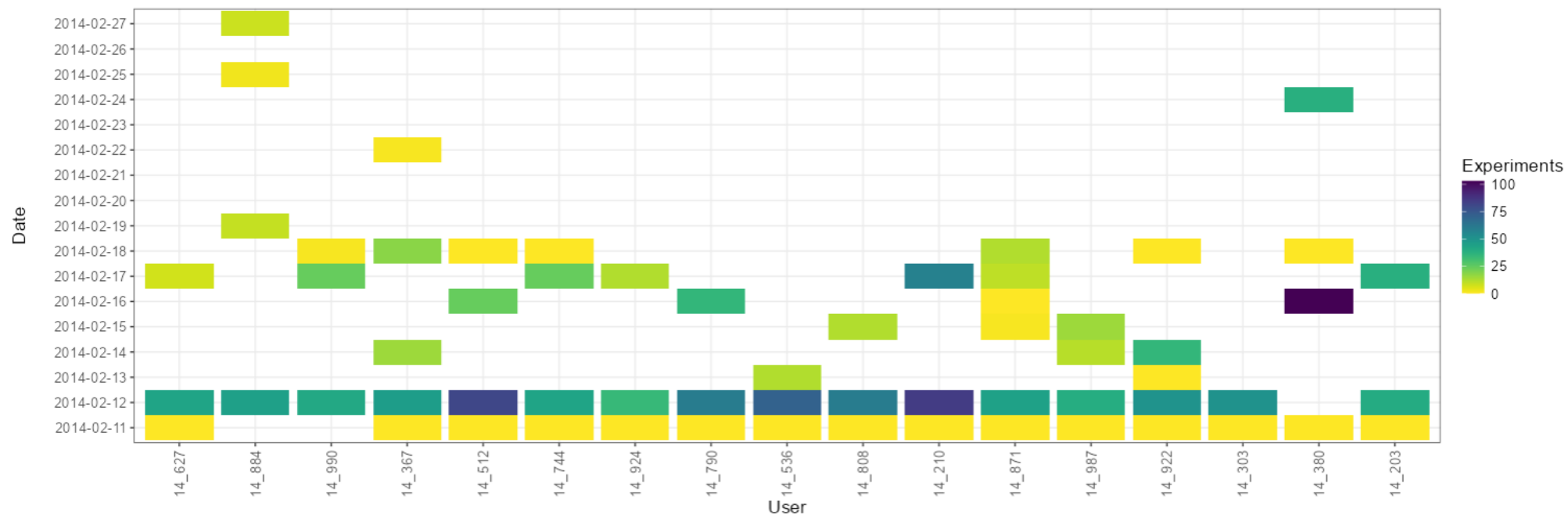
Experiments per Date

Experiments per User and Date

Experimental Timelines

Unique Circuits Distribution

Place your mouse over a data point to see user, date and number of experiments.



This chart shows the number of experiments per user and date. Darker colors indicate more experiments performed. The highest peak of performance can be seen on 2014-02-16 where user 14\_380 performed 103 VISIR experiments.]

Data Input

Global Results &lt;

&gt;&gt; Time

&gt;&gt; Experiments

&gt;&gt; Experiments vs Time

Circuit-based Analysis &lt;

User-specific Results &lt;

Work Indicators &lt;

Data Download &lt;

Help &lt;

Experiments Distribution

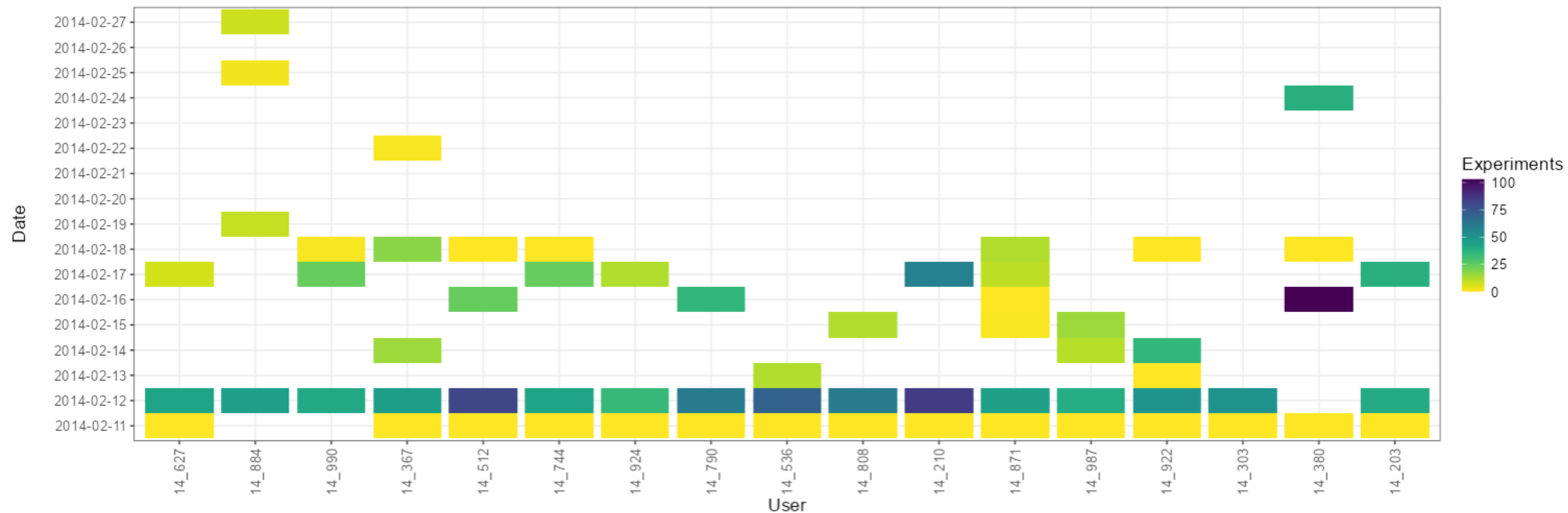
Experiments per Date

Experiments per User and Date

Experimental Timelines

Unique Circuits Distribution

Place your mouse over a data point to see user, date and number of experiments.



This chart shows the number of experiments per user and date. Darker colors indicate more experiments performed. The highest peak of performance can be seen on 2014-02-16 where user 14\_380 performed 103 VISIR experiments.]

Data Input

Global Results &lt;

&gt;&gt; Time

&gt;&gt; Experiments

&gt;&gt; Experiments vs Time

Circuit-based Analysis &lt;

User-specific Results &lt;

Work Indicators &lt;

Data Download &lt;

Help &lt;

Experiments Distribution

Experiments per Date

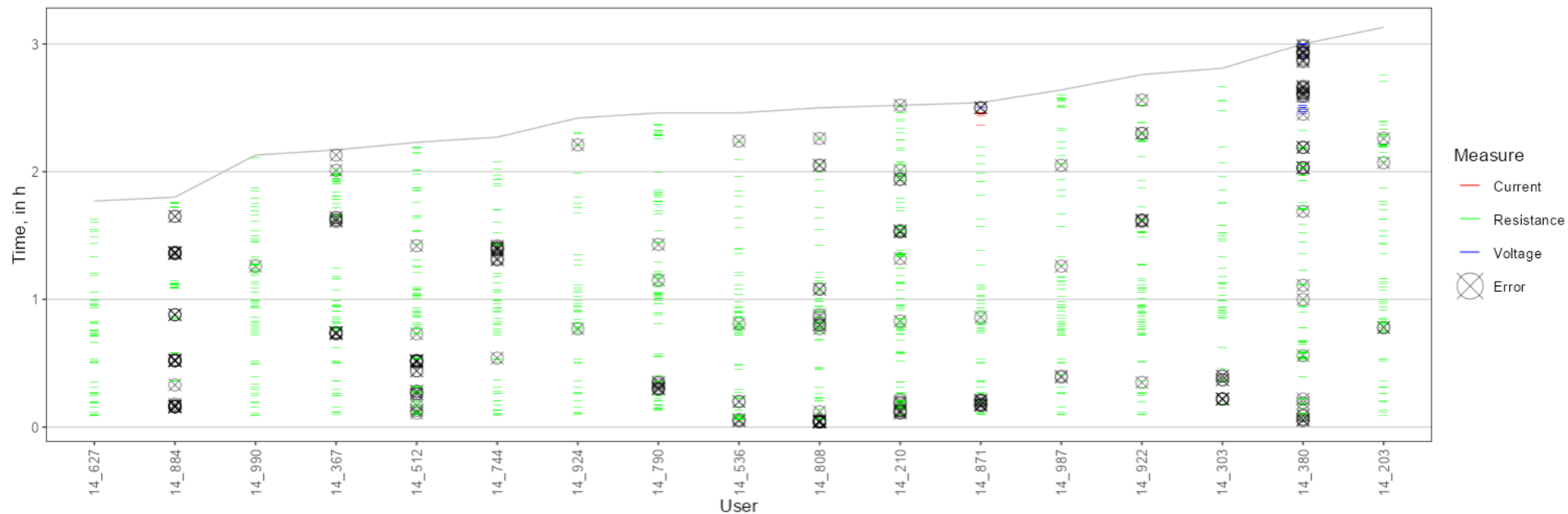
Experiments per User and Date

Experimental Timelines

Unique Circuits Distribution

 Show faceted

In the non-faceted chart, place your mouse over a data point to identify the user.



This chart shows the experiments performed by each user within their timeline. The experiments are represented by different markers according to the measurement taken. The line chart indicates the total time of work per user. The faceted version (checkbox at the top-left) presents each type of measurement in a different plot. Users are ordered by ascending total time of work.

Data Input

Global Results

» Time

» Experiments

» Experiments vs Time

Circuit-based Analysis

User-specific Results

Work Indicators

Data Download

Help

Experiments Distribution

Experiments per Date

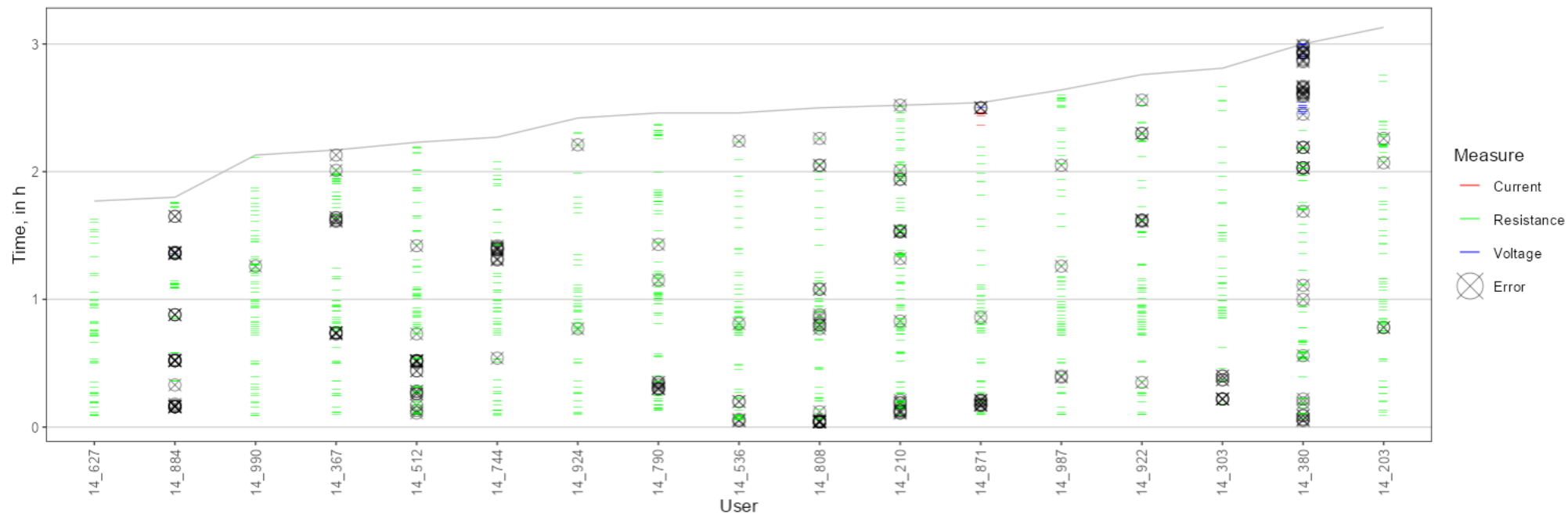
Experiments per User and Date

Experimental Timelines

Unique Circuits Distribution

 Show faceted

In the non-faceted chart, place your mouse over a data point to identify the user.



This chart shows the experiments performed by each user within their timeline. The experiment are represented by different markers according to the measurement taken. The line chart indicates the total time of work per user. The faceted version (checkbox at the top-left) presents each type of measurement in a different plot. Users are ordered by ascending total time of work.

- 🏠 Data Input
- 📁 Global Results <
- Time
- Experiments
- Experiments vs Time
- 📁 Circuit-based Analysis <
- 📁 User-specific Results <
- 📁 Work Indicators <
- 📄 Data Download <
- 👤 Help <

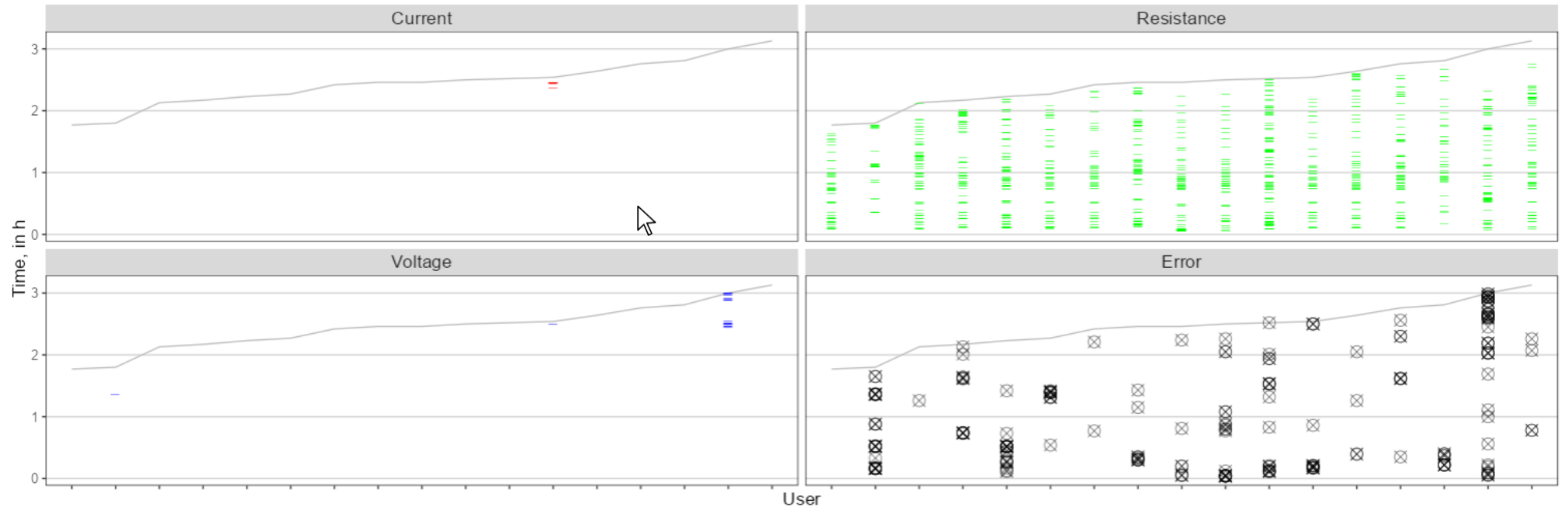
Experiments Distribution

Experiments

 Show faceted

When selected, the different measurement types are split into different charts.

In the non-faceted chart, place your



This chart shows the experiments performed by each user within their timeline. The experiments are represented by different markers according to the measurement taken. The line chart indicates the total time of work per user. The faceted version (checkbox at the top-left) presents each type of measurement in a different plot. Users are ordered by ascending total time of work.

Data Input

Global Results &lt;

&gt;&gt; Time

&gt;&gt; Experiments

&gt;&gt; Experiments vs Time

Circuit-based Analysis &lt;

User-specific Results &lt;

Work Indicators &lt;

Data Download &lt;

Help &lt;

Experiments Distribution

Experiments per Date

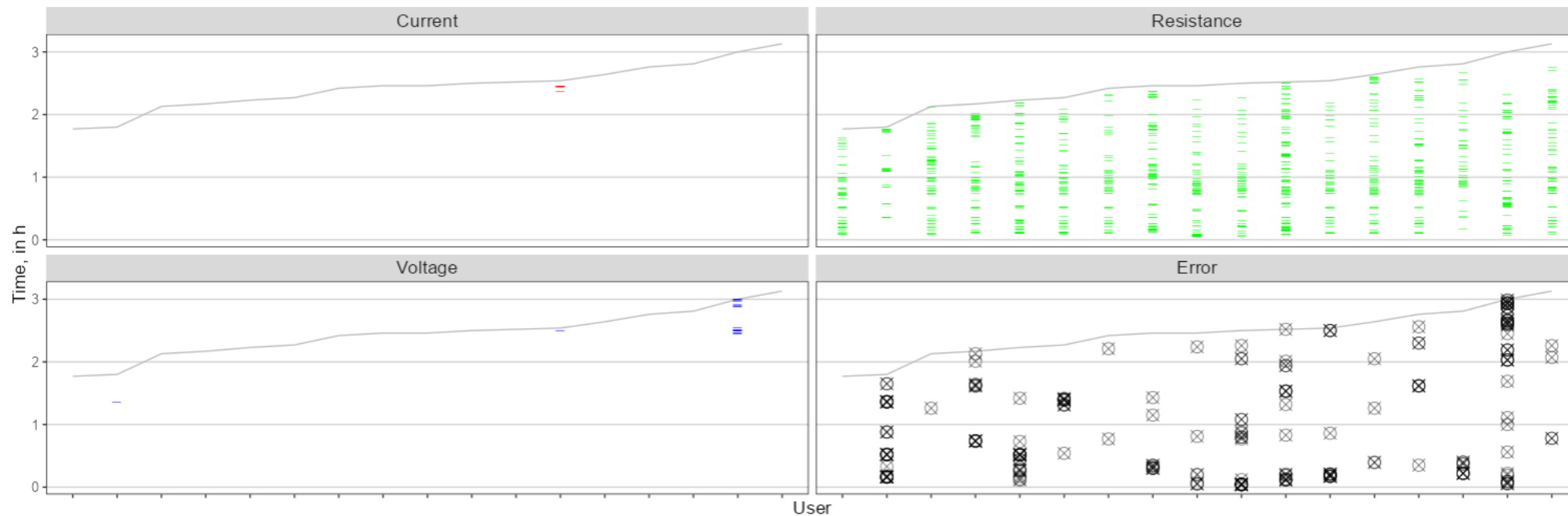
Experiments per User and Date

Experimental Timelines

Unique Circuits Distribution

 Show faceted

In the non-faceted chart, place your mouse over a data point to identify the user.



This chart shows the experiments performed by each user within their timeline. The experiments are represented by different markers according to the measurement taken. The line chart indicates the total time of work per user. The faceted version (checkbox at the top-left) presents each type of measurement in a different plot. Users are ordered by ascending total time of work.

Data Input

Global Results &lt;

&gt;&gt; Time

&gt;&gt; Experiments

&gt;&gt; Experiments vs Time

Circuit-based Analysis &lt;

User-specific Results &lt;

Work Indicators &lt;

Data Download &lt;

Help &lt;

Experiments Distribution

Experiments per Date

Experiments per User and Date

Experimental Timelines

Unique Circuits Distribution

 Check to use simplified circuits (normalized circuits when unchecked)**21**

Minimum, among users

**32.94**

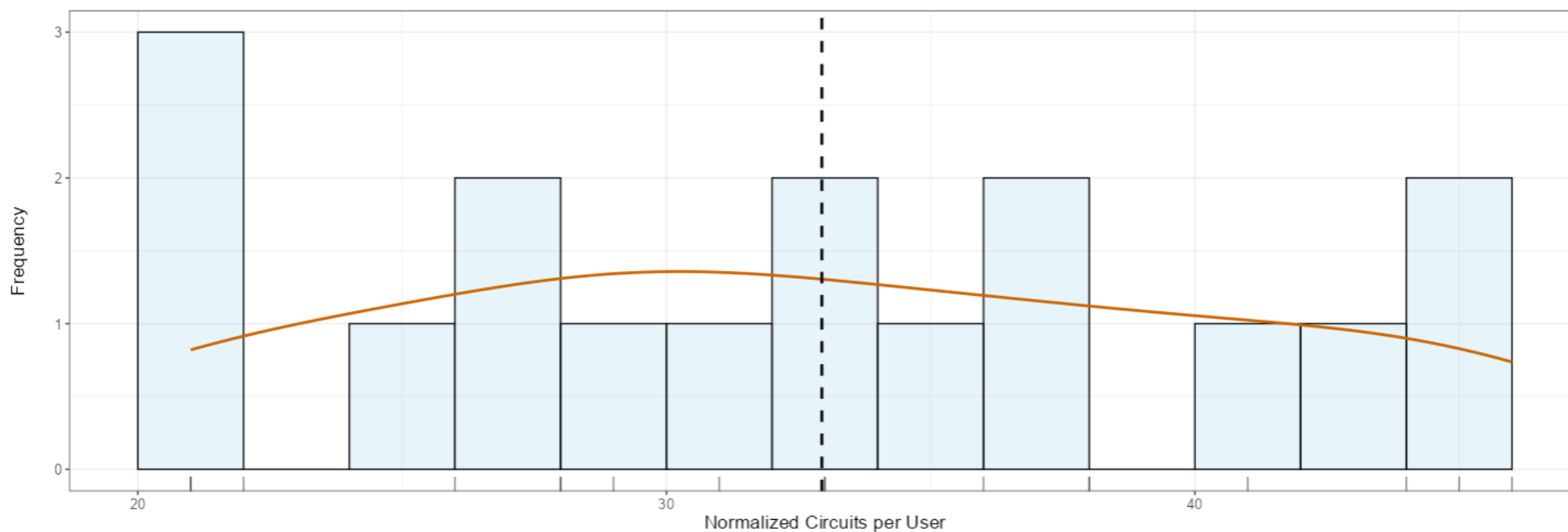
Mean, among users

**46**

Maximum, among users

**192**

Number of unique circuits, in global



This chart shows the distribution of the number of unique circuits per user. Average number of normalized circuits (32.94) is presented as a dashed vertical line. For the pool of users, the number of normalized circuits goes from 21 to 46.

Data Input

Global Results &lt;

&gt;&gt; Time

&gt;&gt; Experiments

&gt;&gt; Experiments vs Time

Circuit-based Analysis &lt;

User-specific Results &lt;

Work Indicators &lt;

Data Download &lt;

Help &lt;

Experiments Distribution

Experiments per Date

Experiments per User and Date

Experimental Timelines

Unique Circuits Distribution

 Check to use simplified circuits (normalized circuits when unchecked)**21**

Minimum, among users

**32.94**

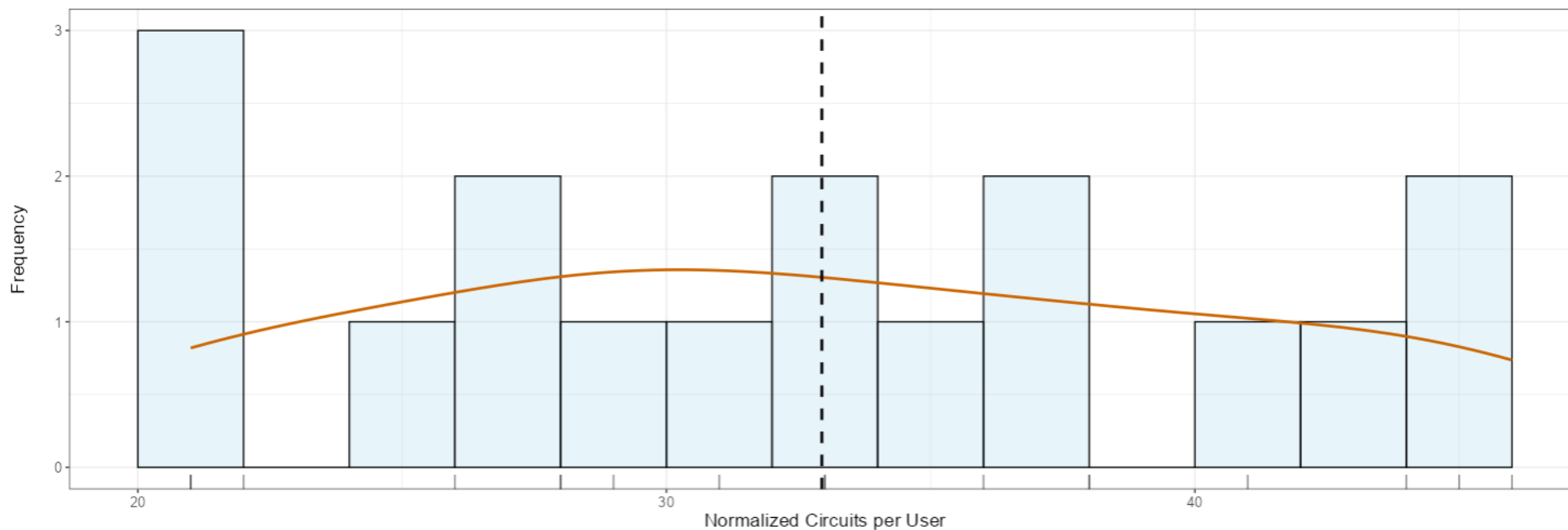
Mean, among users

**46**

Maximum, among users

**192**

Number of unique circuits, in global



This chart shows the distribution of the number of unique circuits per user. Average number of normalized circuits (32.94) is presented as a dashed vertical line. For the pool of users, the number of normalized circuits goes from 21 to 46.

Data Input

Global Results &lt;

&gt;&gt; Time

&gt;&gt; Experiments

&gt;&gt; Experiments vs Time

Circuit-based Analysis &lt;

User-specific Results &lt;

Work Indicators &lt;

Data Download &lt;

Help &lt;

Experiments Distribution

Experiments per Date

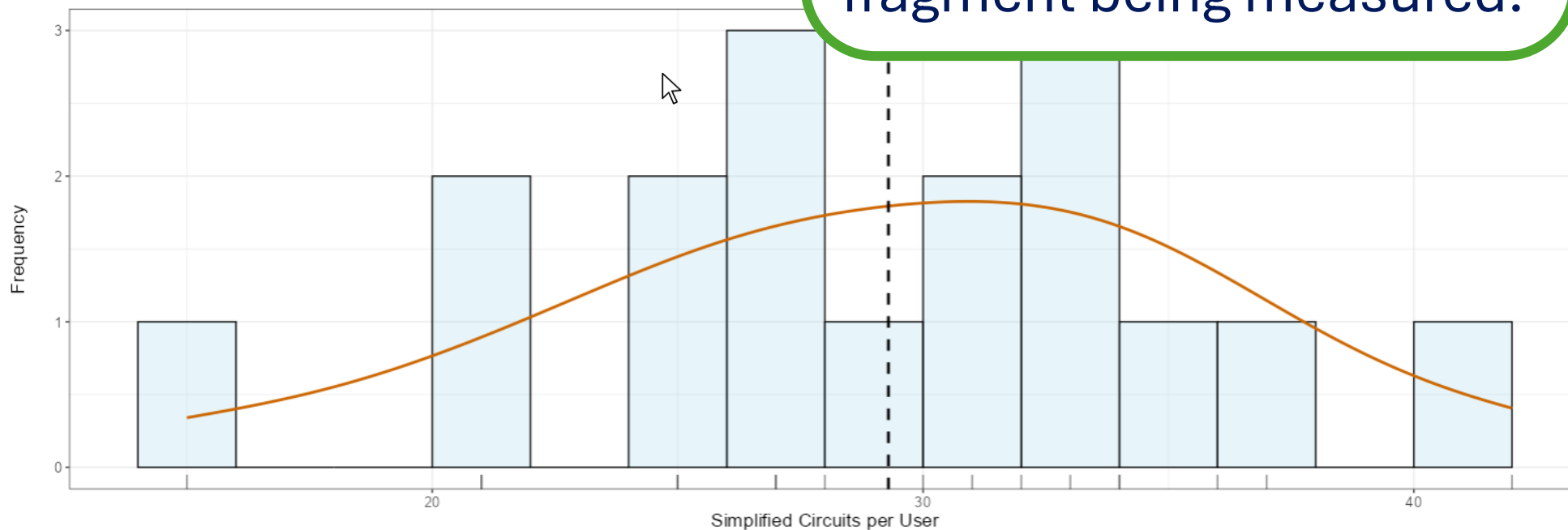
Experiments per User and Date

 Check to use simplified circuits (normalized circuits when unchecked)**15**

Minimum, among users

**29.29**

Mean, among users



This chart shows the distribution of the number of unique circuits per user. Average number of simplified circuits (29.29) is presented as a dashed vertical line. For the pool of users, the number of simplified circuits goes from 15 to 42.

When selected, the standardization process goes one step further, considering only the fragment being measured.

Data Input

Global Results &lt;

&gt;&gt; Time

&gt;&gt; Experiments

&gt;&gt; Experiments vs Time

Circuit-based Analysis &lt;

User-specific Results &lt;

Work Indicators &lt;

Data Download &lt;

Help &lt;

Experiments Distribution

Experiments per Date

Experiments per User and Date

Experimental Timelines

Unique Circuits Distribution

 Check to use simplified circuits (normalized circuits when unchecked)**15**

Minimum, among users

**29.29**

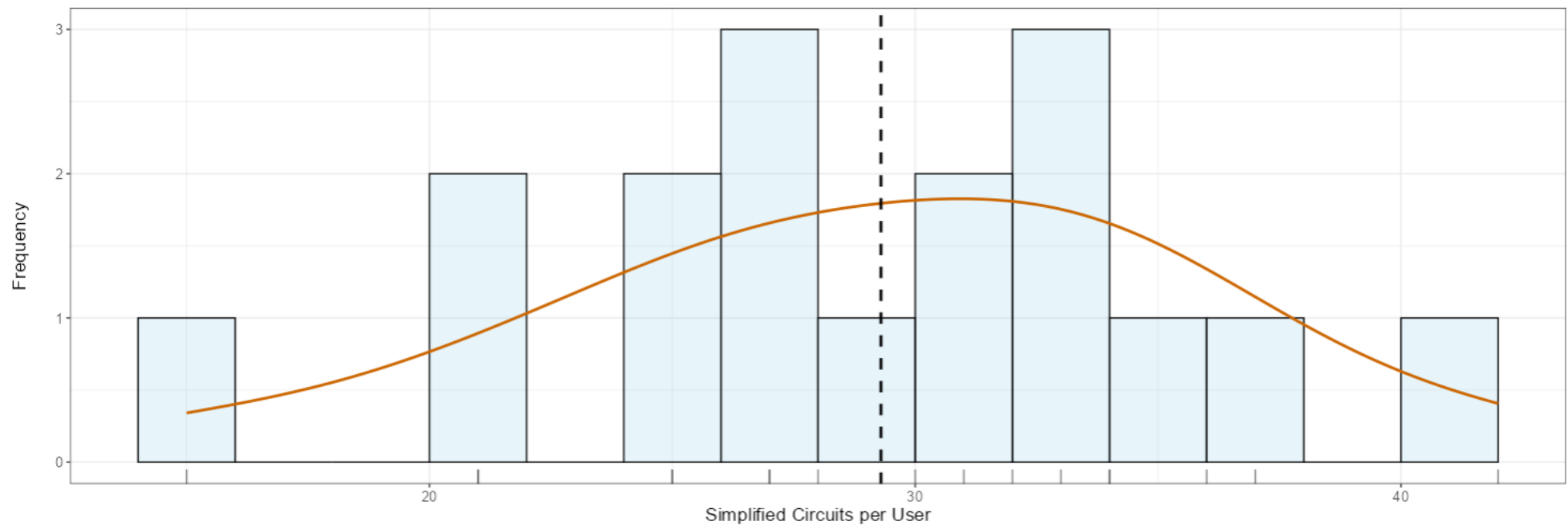
Mean, among users

**42**

Maximum, among users

**131**

Number of unique circuits, in global



This chart shows the distribution of the number of unique circuits per user. Average number of simplified circuits (29.29) is presented as a dashed vertical line. For the pool of users, the number of simplified circuits goes from 15 to 42.

Data Input

Global Results &lt;

&gt;&gt; Time

&gt;&gt; Experiments

&gt;&gt; Experiments vs Time

Circuit-based Analysis &lt;

User-specific Results &lt;

Work Indicators &lt;

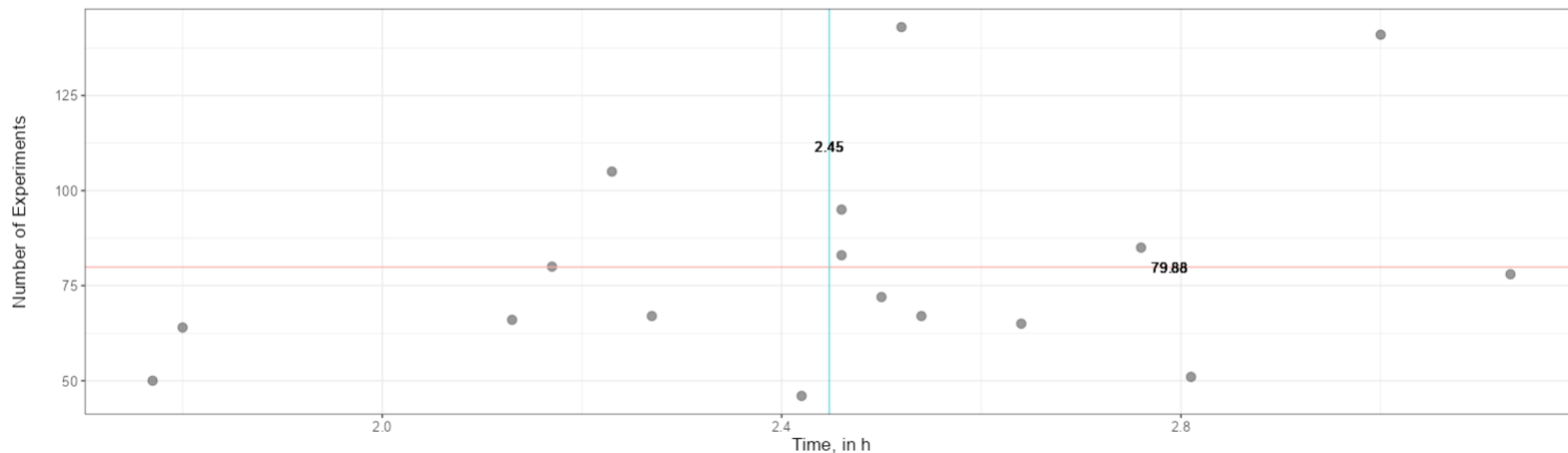
Data Download &lt;

Help &lt;

Experiments vs Time

Unique Circuits vs Time

Place your mouse over a data point to identify user, time and number of experiments.



This chart shows the relationship between the number of experiments and the total time or work. Each marker corresponds to one user. Average number of experiments (79.88) is presented as a red horizontal line. Average total time of work per user (2.45 h) is presented as a blue vertical line.

Data Input

Global Results &lt;

&gt;&gt; Time

&gt;&gt; Experiments

&gt;&gt; Experiments vs Time

Circuit-based Analysis &lt;

User-specific Results &lt;

Work Indicators &lt;

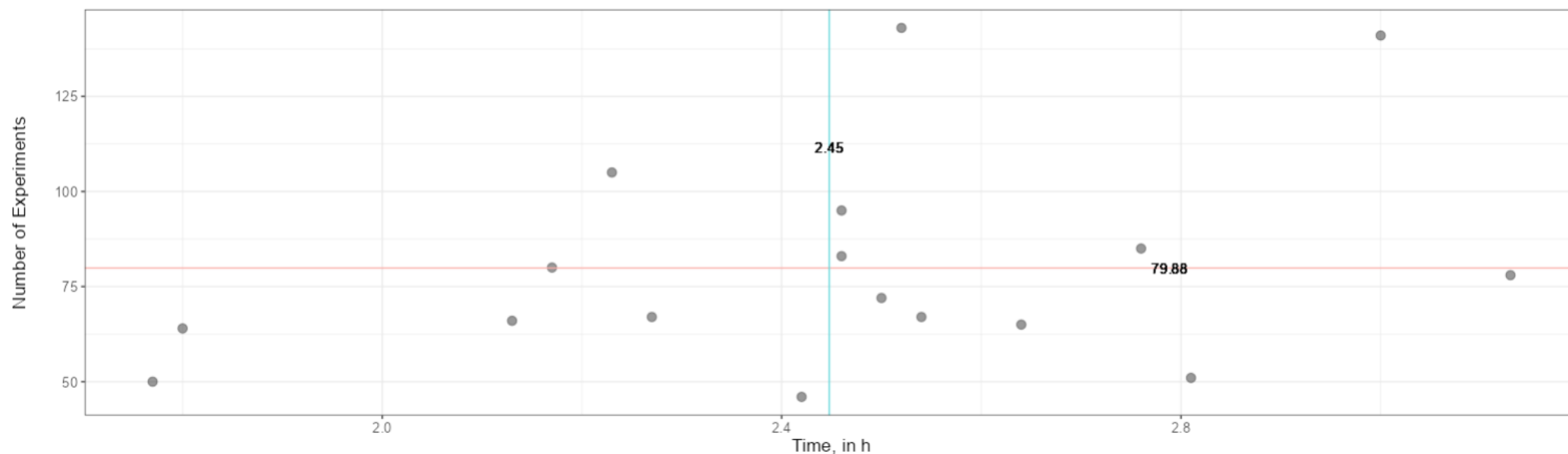
Data Download &lt;

Help &lt;

Experiments vs Time

Unique Circuits vs Time

Place your mouse over a data point to identify user, time and number of experiments.



This chart shows the relationship between the number of experiments and the total time or work. Each marker corresponds to one user. Average number of experiments (79.88) is presented as a red horizontal line. Average total time of work per user (2.45 h) is presented as a blue vertical line.

Data Input

Global Results &lt;

&gt;&gt; Time

&gt;&gt; Experiments

&gt;&gt; Experiments vs Time

Circuit-based Analysis &lt;

User-specific Results &lt;

Work Indicators &lt;

Data Download &lt;

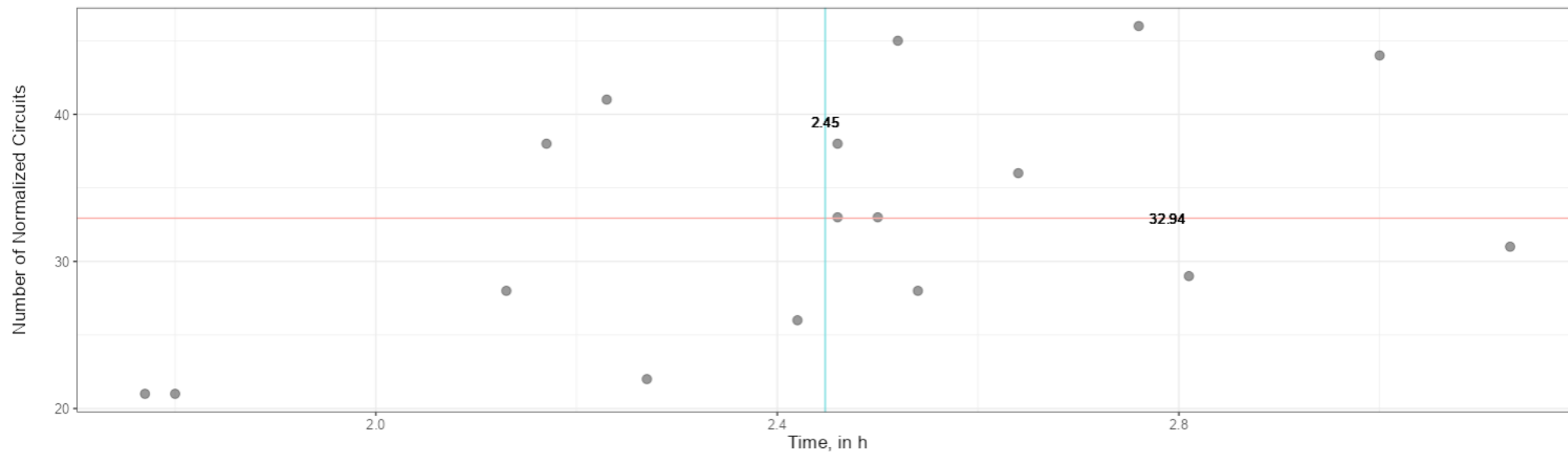
Help &lt;

Experiments vs Time

Unique Circuits vs Time

 Check to use simplified circuits (normalized circuits when unchecked)

Place your mouse over a data point to identify the user.



This chart shows the relationship between the number of unique circuits and the total time or work. Each marker corresponds to one user. Average number of normalized circuits (32.94) is presented as a red horizontal line. Average total time of work per user (2.45 h) is presented as a blue vertical line.

- VISIR/HIVE-DB installation
- Data input
- Exploring global results
- **Analyzing the circuits**
- Supporting specific students
- Mapping students' work
- Downloading a report and/or student's data
- Getting help

# Analyzing the circuits

Data Input

Global Results

Circuit-based Analysis &lt;

User-specific Results &lt;

Work Indicators &lt;

Data Download &lt;

Help &lt;

## Data Input

## Log File

Browse...

2014S1\_LogData\_Sample.csv

Upload complete

## Observation Items (optional)

Browse...

2014S1\_ObservationItems.txt

Upload complete

## Assessment Milestones (optional)

Browse...

2014S1\_AssessmentMilestones.txt

Upload complete

Log file loaded, details are shown below...

17

Users

1925

Actions

2014-02-11

First logged date

2014-02-27

Last logged date

Read 8 observation items

P02M01, P02M02, P02M03, P02M04, P02M05, P02M06, P02M07, P02M08

Read 3 assessment milestones

EVP01, EVP02, EVP03

Data Input

Global Results &lt;

Circuit-based Analysis

&gt;&gt; Common Circuits

User-specific Results &lt;

Work Indicators &lt;

Data Download &lt;

Help &lt;

## Data Input

## Log File

Browse...

2014S1\_LogData\_Sample.csv

Upload complete

## Observation Items (optional)

Browse...

No file selected

## Assessment Milestones (optional)

Browse...

No file selected

Log file loaded, details are shown below...

17

Users

1925

Actions

2014-02-11

First logged date

2014-02-27

Last logged date

*Observation items to be loaded... use the control on the left if needed.**Assessment milestones to be loaded... use the control on the left if needed. Observation items, if available, will be used for evaluation.*

Data Input

Global Results &lt;

Circuit-based Analysis &lt;

&gt;&gt; Common Circuits

User-specific Results &lt;

Work Indicators &lt;

Data Download &lt;

Help &lt;

 Check to use simplified circuits (normalized circuits when unchecked)

Common Circuits

Circuit in Timeline

Circuit per User

This table lists the normalized circuits sorted by decreasing frequency in the log data. An empty normalized circuit means that no components have been added to the breadboard.

Show  entries

Search:

	Normalized Circuits	Times Tested
1	R_X DMM_VHI DMM_VLO 1k	118
2	R_X P01 DMM_VHI 1k/R_X P01 DMM_VLO 1k	65
3	R_X DMM_VHI DMM_VLO 10k/R_X DMM_VHI DMM_VLO 10k	63
4	R_X P01 DMM_VHI 10k/R_X P01 DMM_VLO 1k	62
5	R_X P01 DMM_VHI 1k/R_X P01 DMM_VLO 10k	56
6	R_X P01 DMM_VHI 1k/R_X P01 DMM_VHI 1k/R_X P01 DMM_VLO 10k/R_X P01 DMM_VLO 10k	52
7	R_X P01 DMM_VHI 10k/R_X P01 DMM_VHI 1k/R_X P01 DMM_VLO 10k/R_X P01 DMM_VLO 1k	49
8	R_X DMM_VHI DMM_VLO 10k/R_X DMM_VHI DMM_VLO 1k	47
9	R_X P01 P02 10k/R_X P01 P02 10k/R_X P01 DMM_VHI 1k/R_X P02 DMM_VLO 1k	41
10	R_X DMM_VHI DMM_VLO 1k/R_X DMM_VHI DMM_VLO 1k	40

Showing 1 to 10 of 192 entries

Previous

2

3

4

5

...

20

Next

Data Input

Global Results &lt;

Circuit-based Analysis &lt;

&gt;&gt; Common Circuits

User-specific Results &lt;

Work Indicators &lt;

Data Download &lt;

Help &lt;

 Check to use simplified circuits (normalized circuits are checked when unchecked)

Common Circuits

Circuit in Timeline

Circuit per User

This table lists the normalized circuits sorted by decreasing frequency in the log data. An empty normalized circuit means that no components have been added to the breadboard.

Show 10 entries

Search:

Normalized Circuits

Times Tested

1	R_X DMM_VHI DMM_VLO 1k	118
2	R_X P01 DMM_VHI 1k/R_X P01 DMM_VLO 1k	65
3	R_X DMM_VHI DMM_VLO 10k/R_X DMM_VHI DMM_VLO 10k	63
4	R_X P01 DMM_VHI 10k/R_X P01 DMM_VLO 1k	62
5	R_X P01 DMM_VHI 1k/R_X P01 DMM_VLO 10k	56
6	R_X P01 DMM_VHI 1k/R_X P01 DMM_VHI 1k/R_X P01 DMM_VLO 10k/R_X P01 DMM_VLO 10k	52
7	R_X P01 DMM_VHI 10k/R_X P01 DMM_VHI 1k/R_X P01 DMM_VLO 10k/R_X P01 DMM_VLO 1k	49
8	R_X DMM_VHI DMM_VLO 10k/R_X DMM_VHI DMM_VLO 1k	47
9	R_X P01 P02 10k/R_X P01 P02 10k/R_X P01 DMM_VHI 1k/R_X P02 DMM_VLO 1k	41
10	R_X DMM_VHI DMM_VLO 1k/R_X DMM_VHI DMM_VLO 1k	40

Showing 1 to 10 of 192 entries

Previous

1

2

3

4

5

...

20

Next

Data Input

Global Results &lt;

Circuit-based Analysis &lt;

&gt;&gt; Common Circuits

User-specific Results &lt;

Work Indicators &lt;

Data Download &lt;

Help &lt;

 Check to use simplified circuits (normalized circuits when unchecked)

Common Circuits

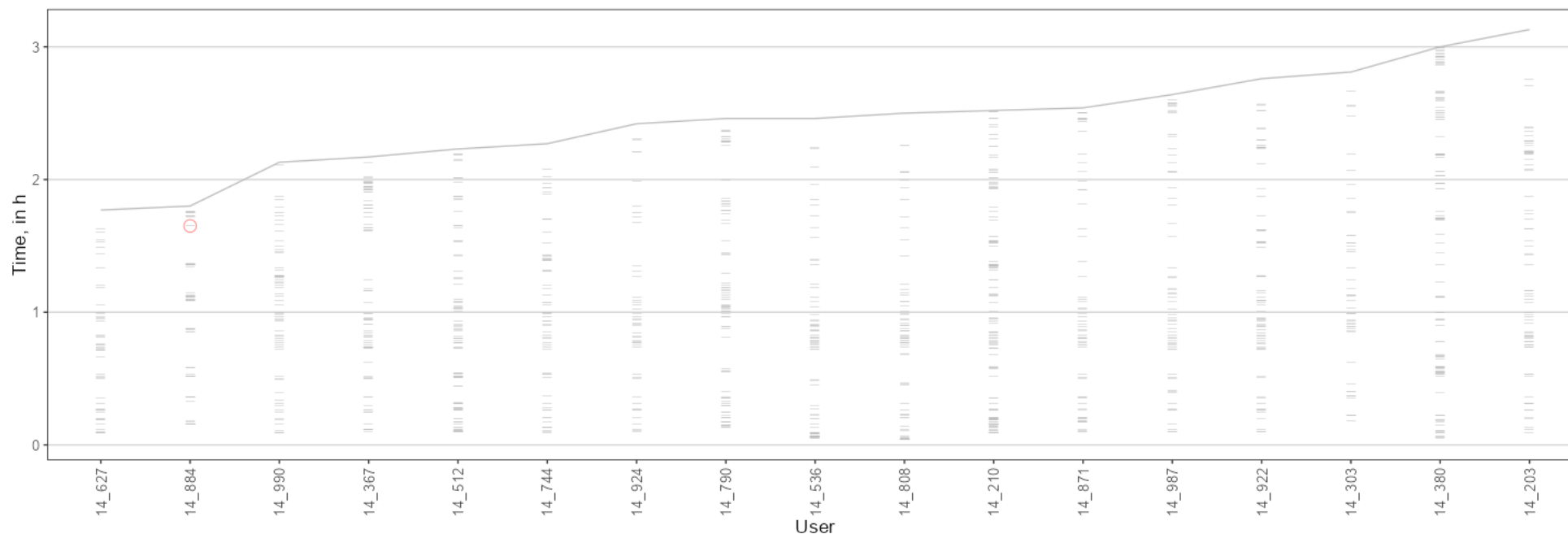
Circuit in Timeline

Circuit per User

Select a circuit...

- Empty circuit

Place your mouse over a data point to identify the user.



This chart shows the experiments performed by each user within their timeline. Experiments corresponding the selected normalized circuit are circled in red color. By default, the empty circuit is selected. The line chart indicates the total time of work per user. Users are ordered by ascending total time of work.

Data Input

Global Results &lt;

Circuit-based Analysis &lt;

&gt;&gt; Common Circuits

User-specific Results &lt;

Work Indicators &lt;

Data Download &lt;

Help &lt;

 Check to use simplified circuits (normalized circuits when unchecked)

Common Circuits

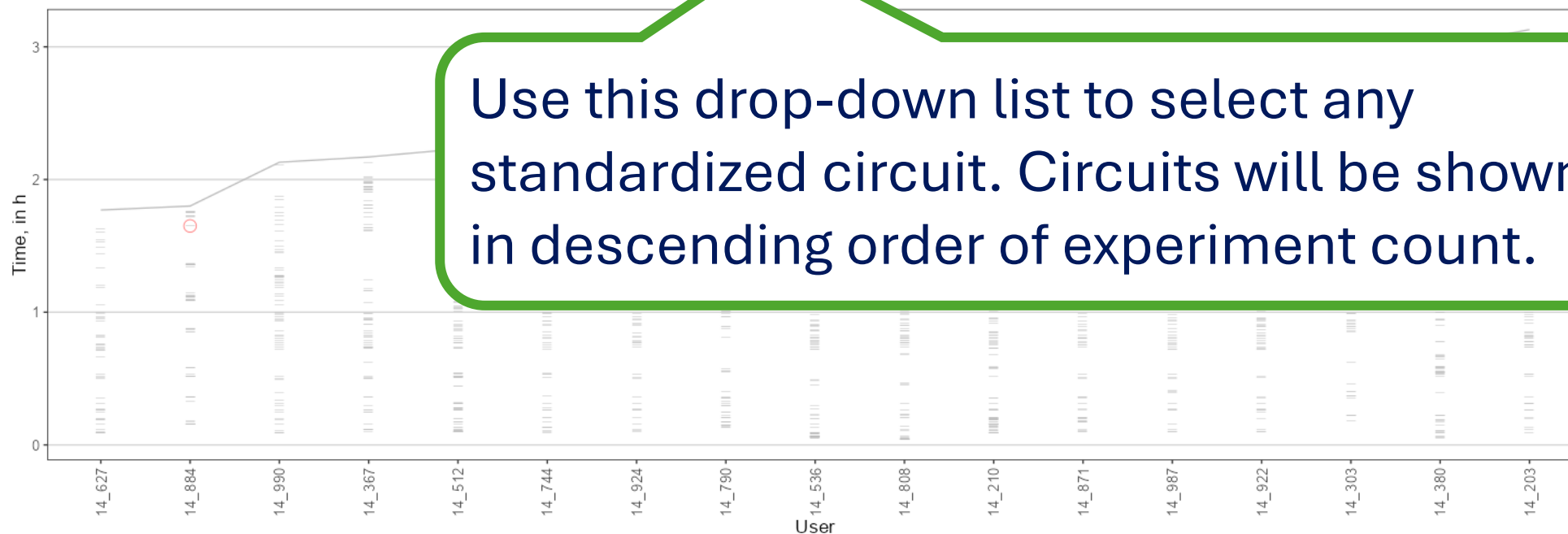
Circuit in Timeline

Circuit per User

Select a circuit...

- Empty circuit

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Data Input

Global Results &lt;

Circuit-based Analysis &lt;

&gt;&gt; Common Circuits

User-specific Results &lt;

Work Indicators &lt;

Data Download &lt;

Help &lt;

 Check to use simplified circuits (normalized circuits when unchecked)

Common Circuits

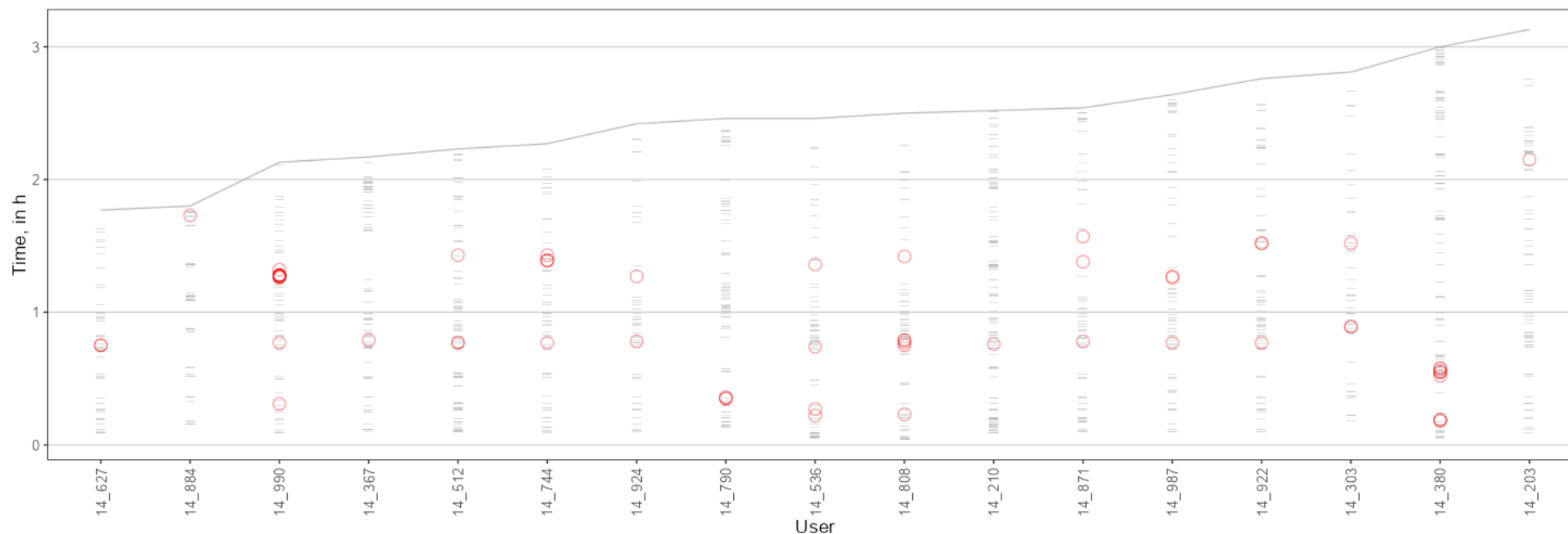
Circuit in Timeline

Circuit per User

Select a circuit...

R\_X P01 DMM\_VHI 10k/R\_X P01 DMM\_VLO 1k

Place your mouse over a data point to identify the user.



This chart shows the experiments performed by each user within their timeline. Experiments corresponding to the selected normalized circuit are circled in red color. By default, the empty circuit is selected. The line chart indicates the total time of work per user. Users are ordered by ascending total time of work.

Data Input

Global Results &lt;

Circuit-based Analysis &lt;

&gt;&gt; Common Circuits

User-specific Results &lt;

Work Indicators &lt;

Data Download &lt;

Help &lt;

 Check to use simplified circuits (normalized circuits when unchecked)

Common Circuits

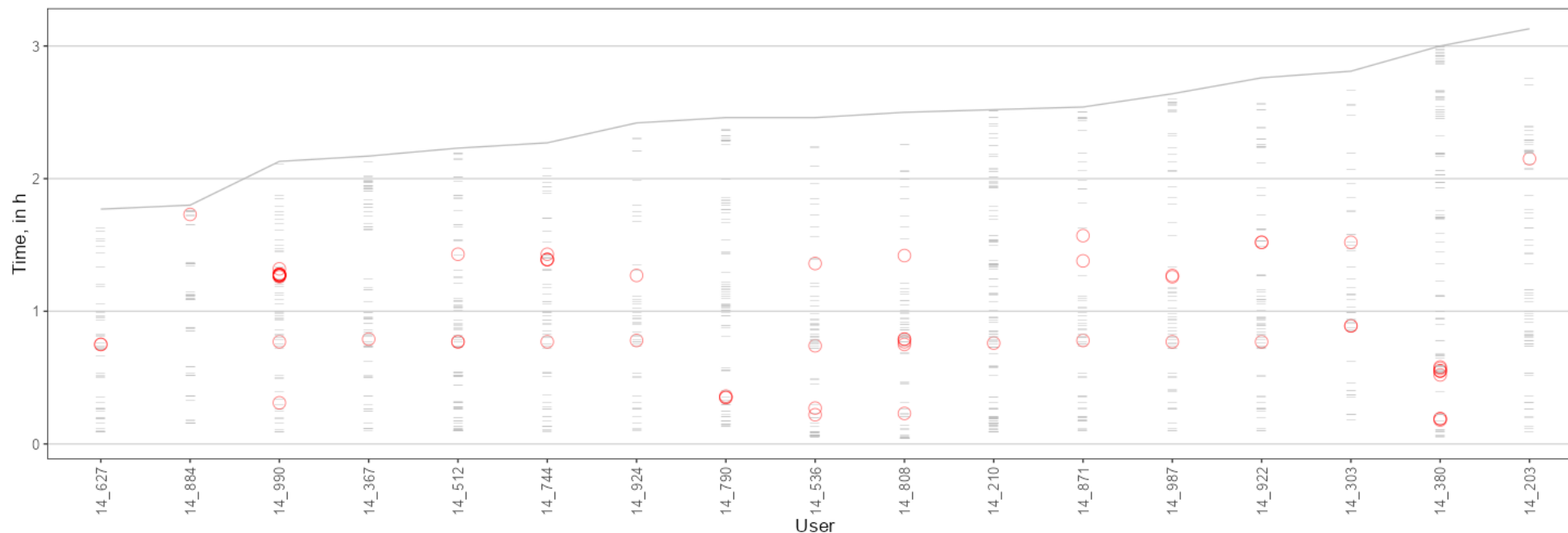
Circuit in Timeline

Circuit per User

Select a circuit...

R\_X P01 DMM\_VHI 10k/R\_X P01 DMM\_VLO 1k

Place your mouse over a data point to identify the user.



This chart shows the experiments performed by each user within their timeline. Experiments corresponding the selected normalized circuit are circled in red color. By default, the empty circuit is selected. The line chart indicates the total time of work per user. Users are ordered by ascending total time of work.

Data Input

Global Results &lt;

Circuit-based Analysis &lt;

&gt;&gt; Common Circuits

User-specific Results &lt;

Work Indicators &lt;

Data Download &lt;

Help &lt;

 Check to use simplified circuits (normalized circuits when unchecked)

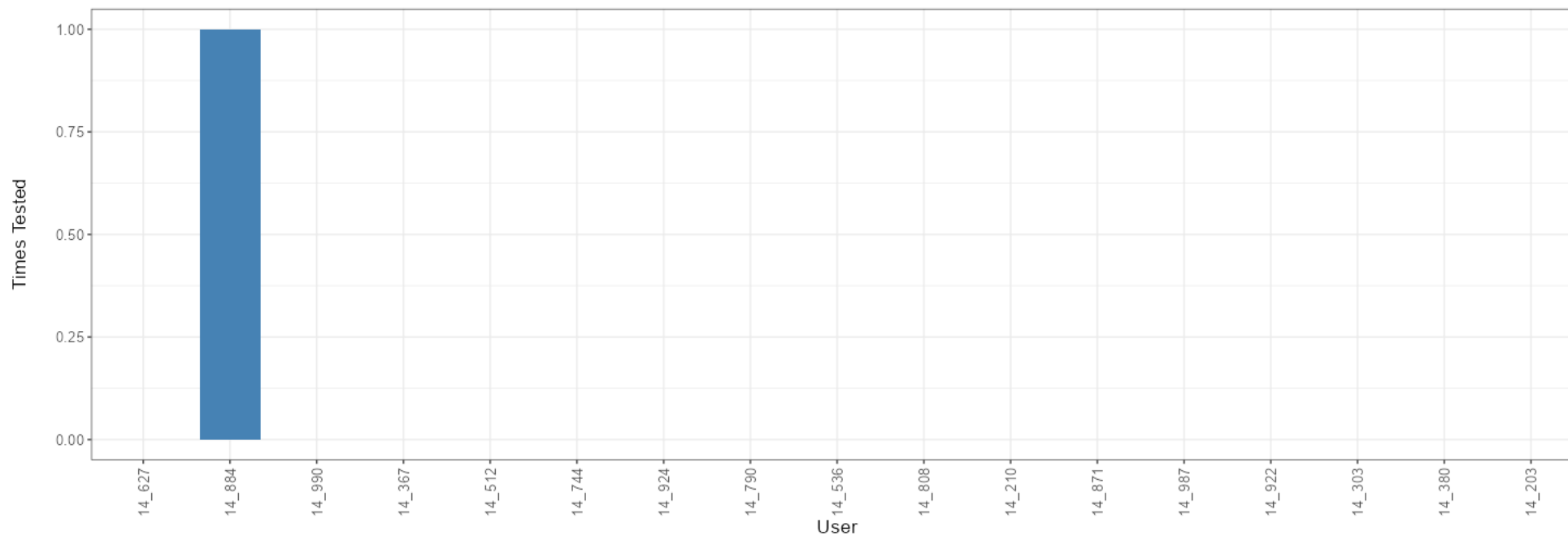
Common Circuits

Circuit in Timeline

Circuit per User

Select a circuit...

- Empty circuit



This chart shows the number of experiments performed by each user that correspond to the selected normalized circuit. By default, the empty circuit is selected. Users are ordered by ascending total time of work, as in the previous chart.

Data Input

Global Results &lt;

Circuit-based Analysis &lt;

&gt;&gt; Common Circuits

User-specific Results &lt;

Work Indicators &lt;

Data Download &lt;

Help &lt;

 Check to use simplified circuits (normalized circuits when unchecked)

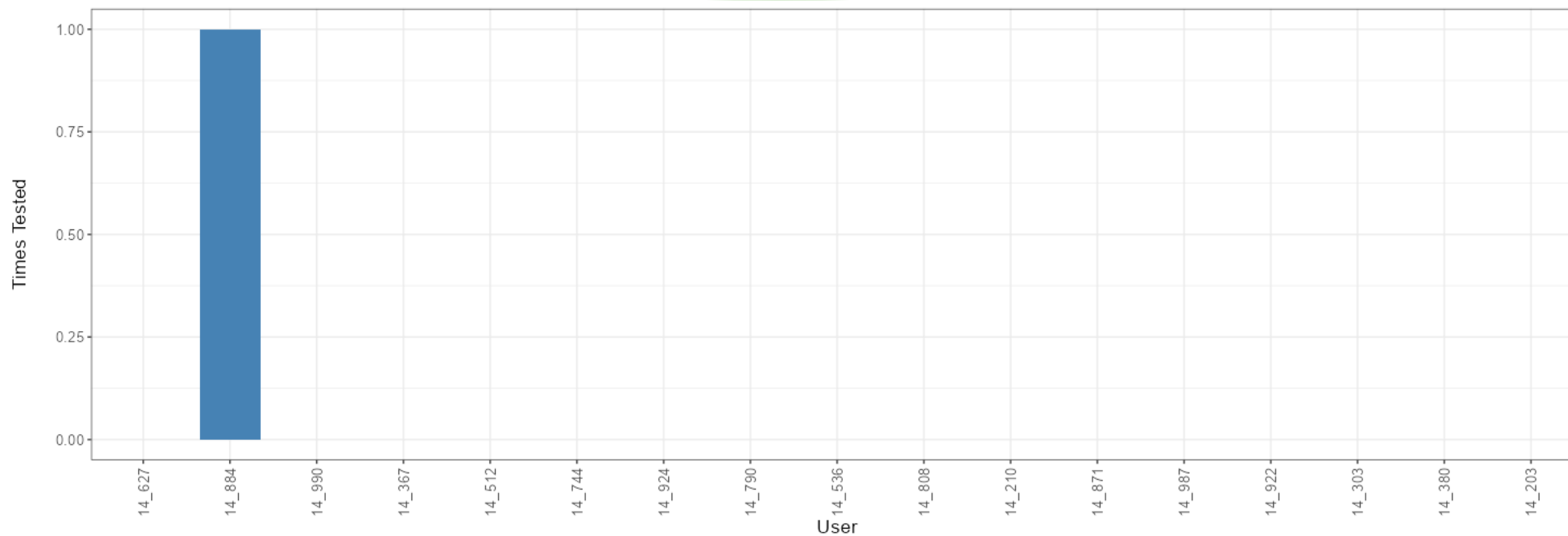
Common Circuits

Circuit in Timeline

Circuit per User

Select a circuit...

- Empty circuit



This chart shows the number of experiments performed by each user that correspond to the selected normalized circuit. By default, the empty circuit is selected. Users are ordered by ascending total time of work, as in the previous chart.

Data Input

Global Results &lt;

Circuit-based Analysis &lt;

&gt;&gt; Common Circuits

User-specific Results &lt;

Work Indicators &lt;

Data Download &lt;

Help &lt;

 Check to use simplified circuits (normalized circuits when unchecked)

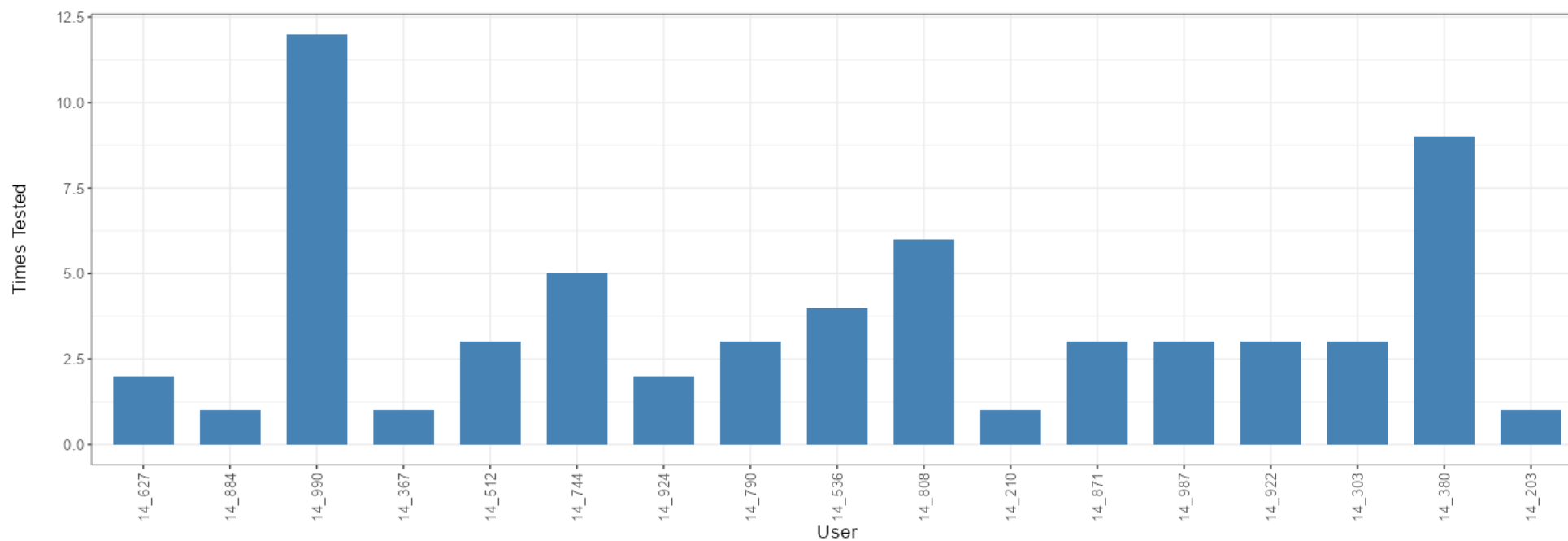
Common Circuits

Circuit in Timeline

Circuit per User

Select a circuit...

R\_X P01 DMM\_VHI 10k/R\_X P01 DMM\_VLO 1k



This chart shows the number of experiments performed by each user that correspond to the selected normalized circuit. By default, the empty circuit is selected. Users are ordered by ascending total time of work, as in the previous chart.

- VISIR/HIVE-DB installation
- Data input
- Exploring global results
- Analyzing the circuits
- **Supporting specific students**
- Downloading a report and/or student's data
- Getting help

# Supporting specific students

Data Input

Global Results &lt;

Circuit-based Analysis &lt;

User-specific Results &lt;

Work Indicators &lt;

Data Download &lt;

Help &lt;

## Data Input

## Log File

Browse... 2014S1\_LogData\_Sample.csv

Upload complete

## Observation Items (optional)

Browse... 2014S1\_ObservationItems.txt

Upload complete

## Assessment Milestones (optional)

Browse... 2014S1\_AssessmentMilestones.txt

Upload complete

Log file loaded, details are shown below...

17

Users

1925

Actions

2014-02-11

First logged date

2014-02-27

Last logged date

Read 8 observation items

P02M01, P02M02, P02M03, P02M04, P02M05, P02M06, P02M07, P02M08

Read 3 assessment milestones

EVP01, EVP02, EVP03

Data Input

Global Results &lt;

Circuit-based Analysis &lt;

User-specific Results ▾

&gt;&gt; User Results

Work Indicators &lt;

Data Download &lt;

Help &lt;

## Data Input

## Log File

Browse... 2014S1\_LogData\_Sample.csv

Upload complete

## Observation Items (optional)

Browse... No file selected

## Assessment Milestones (optional)

Browse... No file selected

Log file loaded, details are shown below...

17

Users

1925

Actions

2014-02-11

First logged date

2014-02-27

Last logged date

*Observation items to be loaded... use the control on the left if needed.**Assessment milestones to be loaded... use the control on the left if needed. Observation items, if available, will be used for evaluation.*

Data Input

Global Results &lt;

Circuit-based Analysis &lt;

User-specific Results &lt;

&gt;&gt; User Results

Work Indicators &lt;

Data Download &lt;

Help &lt;

Select a user...

14\_203

Summary

List of Unique Circuits

History of Experiments

128

Actions

3.13

Total Time, in h

78

Experiments

31

Normalized Circuits

30

Simplified Circuits

74

Resistance Measurements

0

Current Measurements

0

Voltage Measurements

4

Errors in measurement

Data Input

Global Results &lt;

Circuit-based Analysis &lt;

User-specific Results &lt;

&gt;&gt; User Results

Work Indicators &lt;

Data Download &lt;

Help &lt;

Select a user...

14\_203

Summary

List of Unique Circuits

History of Experiments

128

Actions

31

Normalized Circuits

0

Current Measurements

0

Voltage Measurements

4

Errors in measurement

Use this drop-down list to select any user. They will be shown in alphabetical order (first selected by default).

Data Input

Global Results &lt;

Circuit-based Analysis &lt;

User-specific Results &lt;

&gt;&gt; User Results

Work Indicators &lt;

Data Download &lt;

Help &lt;

Select a user...

14\_203

Summary

List of Unique Circuits

History of Experiments

128

Actions

3.13

Total Time, in h

78

Experiments

31

Normalized Circuits

30

Simplified Circuits

74

Resistance Measurements

0

Current Measurements

0

Voltage Measurements

4

Errors in measurement

Data Input

Global Results &lt;

Circuit-based Analysis &lt;

User-specific Results &lt;

&gt;&gt; User Results

Work Indicators &lt;

Data Download &lt;

Help &lt;

Select a user...

14\_203

Summary

List of Unique Circuits

History of Experiments

 Check to use simplified circuits (normalized circuits when unchecked)

This table lists the normalized circuits built by the selected user, sorted by decreasing frequency in the log data. Users are sorted alphabetically and the first one is selected by default. An empty normalized circuit means that no components have been added to the breadboard.

Show 10 entries

Search:

	Normalized Circuit	Times Tested
1	R_X DMM_VHI DMM_VLO 10k/R_X DMM_VHI DMM_VLO 10k	13
2	R_X P01 DMM_VHI 1k/R_X P01 DMM_VLO 10k	7
3	R_X DMM_VHI DMM_VLO 10k/R_X DMM_VHI DMM_VLO 1k	6
4	R_X DMM_VHI DMM_VLO 10k/R_X DMM_VHI DMM_VLO 10k/R_X DMM_VHI DMM_VLO 1k/R_X DMM_VHI DMM_VLO 1k	5
5	R_X P01 DMM_VHI 10k/R_X P01 DMM_VLO 10k	5
6	R_X DMM_VHI DMM_VLO 1k	4
7	R_X P01 DMM_VHI 1k/R_X P01 DMM_VLO 1k	4
8	R_X P01 DMM_VHI 1k/R_X P01 DMM_VHI 1k/R_X P01 DMM_VLO 10k/R_X P01 DMM_VLO 10k	3
9	R_X P01 P02 1k/R_X P01 DMM_VHI 1k/R_X P02 DMM_VLO 10k/R_X P02 DMM_VLO 10k	3
10	R_X DMM_VHI DMM_VLO 10k	2

Showing 1 to 10 of 31 entries

Previous

1

2

3

4

Next

Data Input

Global Results &lt;

Circuit-based Analysis &lt;

User-specific Results &lt;

&gt;&gt; User Results

Work Indicators &lt;

Data Download &lt;

Help &lt;

Select a user...

14\_203

Summary

List of Unique Circuits

History of Experiments

 Check to use simplified circuits (normalized circuits when unchecked)

This table lists the normalized circuits built by the selected user, sorted by decreasing frequency in the log data. Users are sorted alphabetically and the first one is selected by default. An empty normalized circuit means that no components have been added to the breadboard.

Show 10 entries

Search:

	Normalized Circuit	Times Tested
1	R_X DMM_VHI DMM_VLO 10k/R_X DMM_VHI DMM_VLO 10k	13
2	R_X P01 DMM_VHI 1k/R_X P01 DMM_VLO 10k	7
3	R_X DMM_VHI DMM_VLO 10k/R_X DMM_VHI DMM_VLO 1k	6
4	R_X DMM_VHI DMM_VLO 10k/R_X DMM_VHI DMM_VLO 10k/R_X DMM_VHI DMM_VLO 1k/R_X DMM_VHI DMM_VLO 1k	5
5	R_X P01 DMM_VHI 10k/R_X P01 DMM_VLO 10k	5
6	R_X DMM_VHI DMM_VLO 1k	4
7	R_X P01 DMM_VHI 1k/R_X P01 DMM_VLO 1k	4
8	R_X P01 DMM_VHI 1k/R_X P01 DMM_VHI 1k/R_X P01 DMM_VLO 10k/R_X P01 DMM_VLO 10k	3
9	R_X P01 P02 1k/R_X P01 DMM_VHI 1k/R_X P02 DMM_VLO 10k/R_X P02 DMM_VLO 10k	3
10	R_X DMM_VHI DMM_VLO 10k	2

Showing 1 to 10 of 31 entries

Previous

1

2

3

4

Next

Data Input

Global Results &lt;

Circuit-based Analysis &lt;

User-specific Results &lt;

&gt;&gt; User Results

Work Indicators &lt;

Data Download &lt;

Help &lt;

Select a user...

14\_203

Summary

List of Unique Circuits

History of Experiments

This table lists all the experiments performed by the selected user, sorted chronologically. Users are sorted alphabetically and the first one is selected by default. The table includes the measurement done in the experiment. An error there means that the measurement was wrongly set up.

Show 10 entries

Search:

	Time	Sent Date	Coded Circuit	Measure
1	5.43	2014-02-12 10:08:50	W_X DMM_VHI A6/W_X DMM_VLO A10/R_X A6 A10 1k	Resistance
2	7.42	2014-02-12 10:10:49	W_X DMM_VHI A6/W_X DMM_VLO A10/R_X A6 A10 1k	Resistance
3	7.58	2014-02-12 10:10:59	W_X DMM_VHI A6/W_X DMM_VLO A10/R_X A6 A10 1k	Resistance
4	12.08	2014-02-12 10:15:29	W_X DMM_VHI A6/W_X DMM_VLO A10/R_X A6 A10 1k	Resistance
5	12.38	2014-02-12 10:15:47	W_X DMM_VHI A6/W_X DMM_VLO A10/R_X A6 A10 10k	Resistance
6	15.32	2014-02-12 10:18:43	W_X A10 A14/W_X DMM_VHI A6/W_X DMM_VLO A10/R_X A6 A10 1k/R_X A14 A18 1k	Resistance
7	15.8	2014-02-12 10:19:12	W_X A10 A14/W_X DMM_VHI A6/W_X DMM_VLO A18/R_X A6 A10 1k/R_X A14 A18 1k	Resistance
8	18.58	2014-02-12 10:21:59	W_X A10 A14/W_X DMM_VHI A6/W_X DMM_VLO A18/R_X A6 A10 1k/R_X A14 A18 10k	Resistance
9	18.63	2014-02-12 10:22:02	W_X A10 A14/W_X DMM_VHI A6/W_X DMM_VLO A18/R_X A6 A10 1k/R_X A14 A18 10k	Resistance
10	18.68	2014-02-12 10:22:05	W_X A10 A14/W_X DMM_VHI A6/W_X DMM_VLO A18/R_X A6 A10 1k/R_X A14 A18 10k	Resistance

Showing 1 to 10 of 78 entries

Previous

1

2

3

4

5

...

8

Next

- VISIR/HIVE-DB installation
- Data input
- Exploring global results
- Analyzing the circuits
- Supporting specific students
- **Mapping students' work**
- Downloading a report and/or student's data
- Getting help

# Mapping students' work

Data Input

Global Results &lt;

Circuit-based Analysis &lt;

User-specific Results &lt;

Work Indicators &lt;

Data Download &lt;

Help &lt;

## Data Input

## Log File

Browse... 2014S1\_LogData\_Sample.csv  
Upload complete

## Observation Items (optional)

Browse... 2014S1\_ObservationItems.txt  
Upload complete

## Assessment Milestones (optional)

Browse... 2014S1\_AssessmentMilestones.txt  
Upload complete

Log file loaded, details are shown below...

17

Users

1925

Actions

2014-02-11

First logged date

2014-02-27

Last logged date

Read 8 observation items

P02M01, P02M02, P02M03, P02M04, P02M05, P02M06, P02M07, P02M08

Read 3 assessment milestones

EVP01, EVP02, EVP03

Data Input

Global Results &lt;

Circuit-based Analysis &lt;

User-specific Results &lt;

Work Indicators &lt;

&gt;&gt; Observation Items

&gt;&gt; Assessment milestones

Data Download &lt;

Help &lt;

## Data Input

## Log File

Browse... 2014S1\_LogData\_Sample.csv

Upload complete

## Observation Items (optional)

Browse... No file selected

## Assessment Milestones (optional)

Browse... No file selected

Log file loaded, details are shown below...

17

Users

1925

Actions

2014-02-11

First logged date

2014-02-27

Last logged date

*Observation items to be loaded... use the control on the left if needed.**Assessment milestones to be loaded... use the control on the left if needed. Observation items, if available, will be used for evaluation.*

Data Input

Global Results &lt;

Circuit-based Analysis &lt;

User-specific Results &lt;

Work Indicators &lt;

&gt;&gt; Observation Items

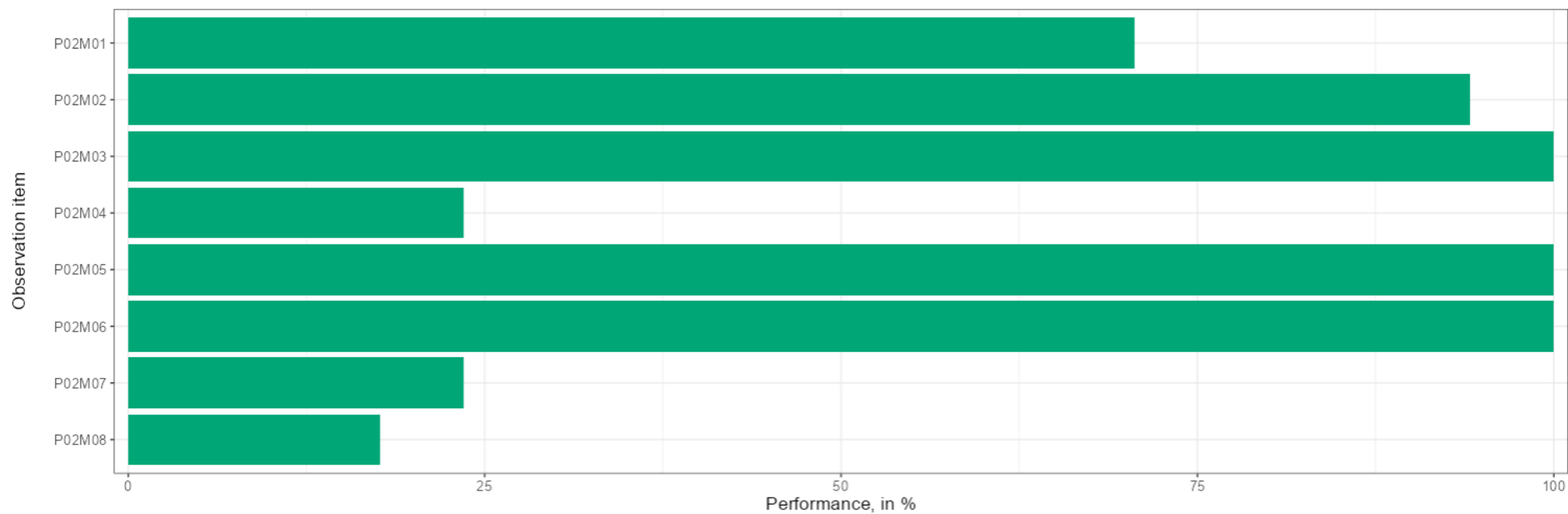
&gt;&gt; Assessment Milestones

Data Download &lt;

Help &lt;

Group Performance

Performance per User

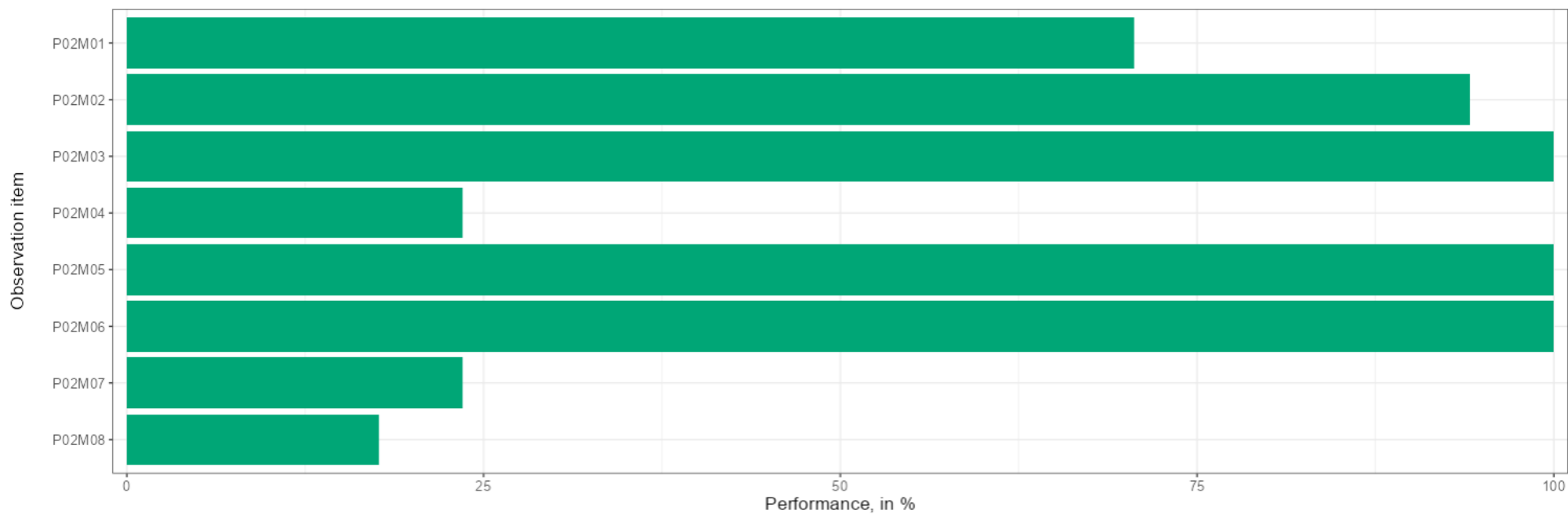


This bar chart shows the percentage of users that performed each observation item anytime in their resolution process.

- 🏠 Data Input
- 📁 Global Results <
- 📁 Circuit-based Analysis <
- 📁 User-specific Results <
- 📁 Work Indicators <
- Observation Items
- Assessment Milestones
- 📄 Data Download <
- 🔗 Help <

Group Performance

Performance per User



This bar chart shows the percentage of users that performed each observation item anytime in their resolution process.

Data Input

Global Results &lt;

Circuit-based Analysis &lt;

User-specific Results &lt;

Work Indicators &lt;

&gt;&gt; Observation Items

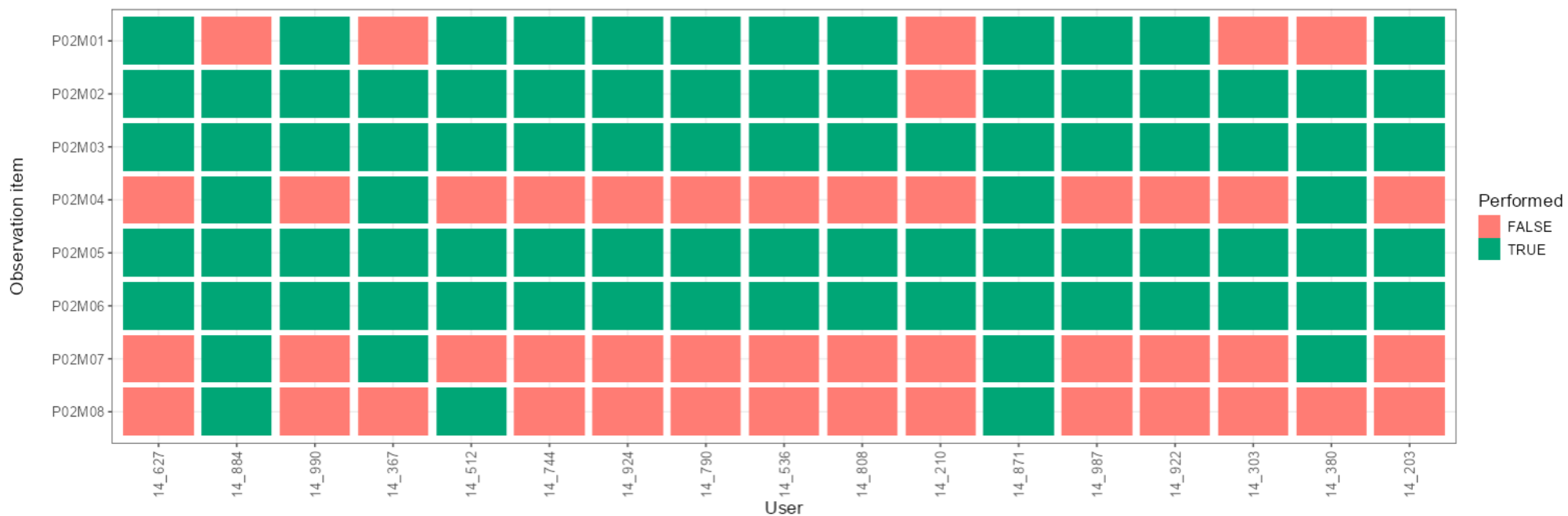
&gt;&gt; Assessment Milestones

Data Download &lt;

Help &lt;

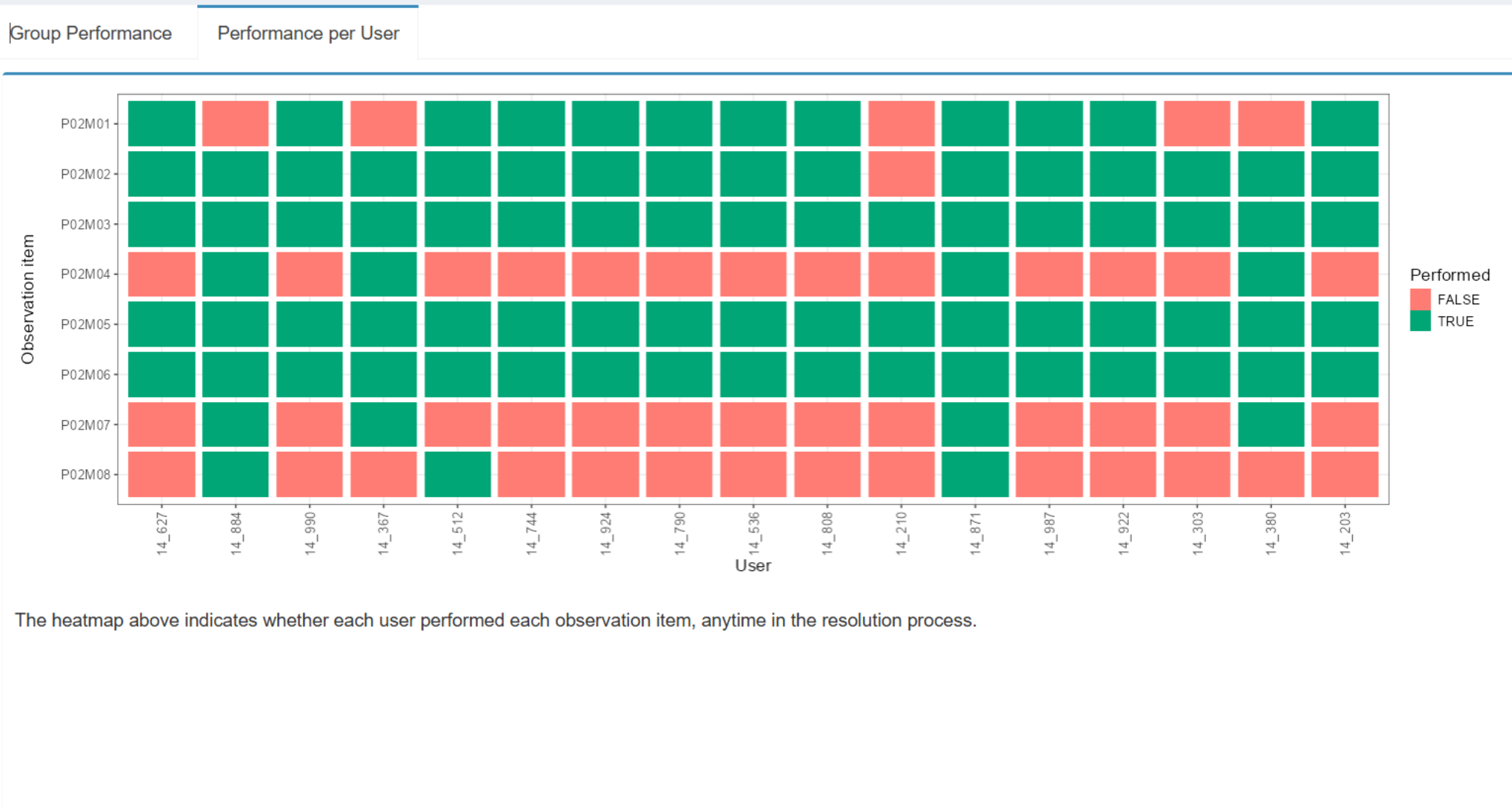
Group Performance

Performance per User



The heatmap above indicates whether each user performed each observation item, anytime in the resolution process.

- 🏠 Data Input
- 📁 Global Results <
- 📁 Circuit-based Analysis <
- 📁 User-specific Results <
- 📁 Work Indicators <
- Observation Items <
- Assessment Milestones <
- 📄 Data Download <
- 📄 Help <



Data Input

Global Results &lt;

Circuit-based Analysis &lt;

User-specific Results &lt;

Work Indicators &lt;

&gt;&gt; Observation Items

&gt;&gt; Assessment Milestones

Data Download &lt;

Help &lt;

Group Achievement

Achievement per User

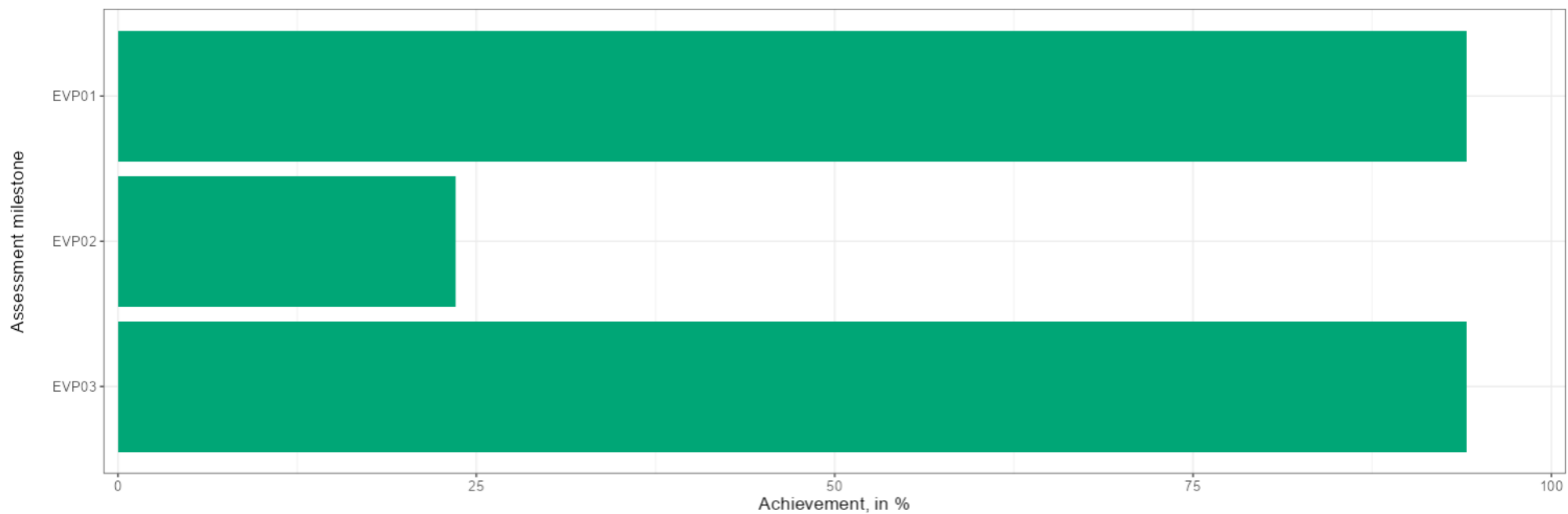


This bar chart shows the percentage of users that achieved each assessment milestone anytime in their resolution process.

- 🏠 Data Input
- 📁 Global Results <
- 📁 Circuit-based Analysis <
- 📁 User-specific Results <
- 📁 Work Indicators <
- Observation Items
- **Assessment Milestones**
- 📄 Data Download <
- 🔗 Help <

Group Achievement

Achievement per User



This bar chart shows the percentage of users that achieved each assessment milestone anytime in their resolution process.

- 🏠 Data Input
- 📁 Global Results <
- 📁 Circuit-based Analysis <
- 📁 User-specific Results <
- 📁 Work Indicators <
- Observation Items
- Assessment Milestones
- 📄 Data Download <
- 🔗 Help <

Group Achievement

Achievement per User



The heatmap above indicates whether each user achieved each assessment milestone, anytime in the resolution process.

- VISIR/HIVE-DB installation
- Data input
- Exploring global results
- Analyzing the circuits
- Supporting specific students
- Mapping students' work
- **Downloading a report and/or student's data**
- Getting help

# Downloading a report and/or student's data

## Data Input

Global Results &lt;

Circuit-based Analysis &lt;

User-specific Results &lt;

Work Indicators &lt;

Data Download &lt;

Help &lt;

## Data Input

## Log File

Browse... 2014S1\_LogData\_Sample.csv

Upload complete

## Observation Items (optional)

Browse... 2014S1\_ObservationItems.txt

Upload complete

## Assessment Milestones (optional)

Browse... 2014S1\_AssessmentMilestones.txt

Upload complete

Log file loaded, details are shown below...

17

Users

1925

Actions

2014-02-11

First logged date

2014-02-27

Last logged date

Read 8 observation items

P02M01, P02M02, P02M03, P02M04, P02M05, P02M06, P02M07, P02M08

Read 3 assessment milestones

EVP01, EVP02, EVP03

This command button creates an HTML analysis report. It will open with your default browser.

# VISIR-DB Report

## VISIR-DB

### Data Set Main Features

---

The analyzed data set, **2014S1\_LogData\_Sample.csv**, includes 1925 actions from 2014-02-11 10:35:01 to 2014-02-27 11:44:08.

### Users

There are 17 unique users in the data set. Their IDs are...

14\_203, 14\_210, 14\_303, 14\_367, 14\_380, 14\_512, 14\_536, 14\_627, 14\_744, 14\_790, 14\_808, 14\_871, 14\_884, 14\_922, 14\_924, 14\_987, 14\_990.

### Work Indicators

There are 8 observation items in **2014S1\_ObservationItems.txt**:

P02M01, P02M02, P02M03, P02M04, P02M05, P02M06, P02M07, P02M08.

There are 3 assessment milestones in **2014S1\_AssessmentMilestones.txt**:

# VISIR-DB Report

## VISIR-DB

### Data Set Main Features

The analyzed data set, 2014S1\_LogData\_Sample.csv, includes 1925 actions from 2014-02-11 10:35:01 to 2014-02-27 11:44:08.

### Users

There are 17 unique users in the data set. Their IDs are...  
14\_203, 14\_210, 14\_303, 14\_367, 14\_380, 14\_512, 14\_536, 14\_627, 14\_744, 14\_790, 14\_808, 14\_871, 14\_884, 14\_922, 14\_924, 14\_987, 14\_990.

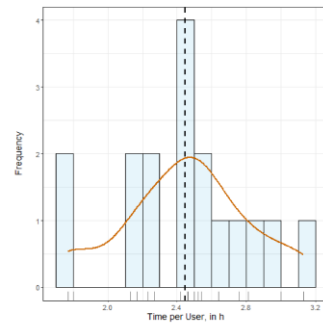
### Work Indicators

There are 8 observation items in 2014S1\_ObservationItems.txt:  
P02M01, P02M02, P02M03, P02M04, P02M05, P02M06, P02M07, P02M08.

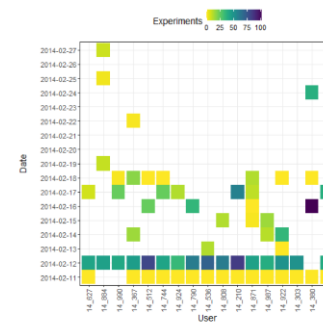
There are 3 assessment milestones in 2014S1\_AssessmentMilestones.txt:  
EVP01, EVP02, EVP03.

### Global Results

### Time



Time on Task vs User per Date - HeatMap

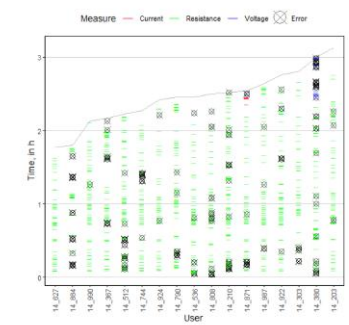


Experiments vs Time

### Number of Experiments vs Time

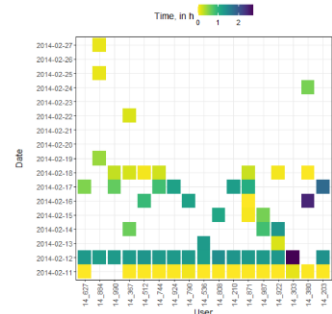
```
## warning in geom_text(aes(x = meanTT + maxTT)/2, y = meanNC, label = round(meanNC, 1): All aesthetics have length 1, but the data has 17 rows.
## i Please consider using 'annotate()' or provide this layer with data containing ## a single row.
```

```
## warning in geom_text(aes(x = meanTT, y = (meanNC + maxNC)/2, label = round(meanTT, 1): All aesthetics have length 1, but the data has 17 rows.
## i Please consider using 'annotate()' or provide this layer with data containing ## a single row.
```



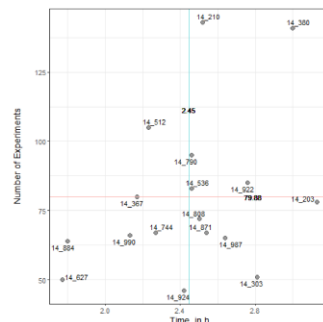
Experiments per User and Date - Heat map

These are the first eight pages of the analysis report as printed to PDF.



### Experiments

### Experimental Timelines



### Circuit-based Analysis

#### Measurement Types

The data set includes 1358 circuits, which can be traced to the following measurement types:

Measurement	Count
Current	8
Resistance	1122
Voltage	20
Error	208

#### Common Circuits

The 10 top common normalized circuits are

Circuit	Times Tested
R_X DMM_VHI DMM_VLO 1k	118
R_X P01 DMM_VHI 1k/R_X P01 DMM_VLO 1k	65

Circuit	Times Tested
R_X DMM_VHI DMM_VLO 10k/R_X DMM_VHI DMM_VLO 10k	63
R_X P01 DMM_VHI 10k/R_X P01 DMM_VLO 1k	62
R_X P01 DMM_VHI 1k/R_X P01 DMM_VLO 10k	56
R_X P01 DMM_VHI 1k/R_X P01 DMM_VLO 10k/R_X P01 DMM_VLO 10k	52
R_X P01 DMM_VHI 10k/R_X P01 DMM_VHI 1k/R_X P01 DMM_VLO 10k/R_X P01 DMM_VLO 1k	49
R_X DMM_VHI DMM_VLO 10k/R_X DMM_VHI DMM_VLO 1k	47
R_X P01 P02 10k/R_X P01 P02 10k/R_X P01 DMM_VHI 1k/R_X P02 DMM_VLO 1k	41
R_X DMM_VHI DMM_VLO 1k/R_X DMM_VHI DMM_VLO 1k	40

The 10 top common simplified circuits are

Circuit	Times Tested
R_X DMM_VHI DMM_VLO 1k	155
R_X P01 DMM_VHI 1k/R_X P01 DMM_VLO 1k	120
R_X DMM_VHI DMM_VLO 10k/R_X DMM_VHI DMM_VLO 10k	74
R_X P01 DMM_VHI 10k/R_X P01 DMM_VLO 1k	63
R_X P01 DMM_VHI 1k/R_X P01 DMM_VLO 10k	62
R_X P01 DMM_VHI 1k/R_X P01 DMM_VLO 10k/R_X P01 DMM_VLO 10k	57
R_X P01 DMM_VHI 1k/R_X P01 DMM_VLO 10k/R_X P01 DMM_VLO 10k/R_X P01 DMM_VLO 10k	52
R_X P01 DMM_VHI 10k/R_X P01 DMM_VHI 1k/R_X P01 DMM_VLO 10k/R_X P01 DMM_VLO 1k	49
R_X DMM_VHI DMM_VLO 10k/R_X DMM_VHI DMM_VLO 1k	47
R_X P01 DMM_VHI 10k/R_X P01 DMM_VLO 10k	41

#### Common Errors

The 10 top common normalized circuits which are detected as errors, are

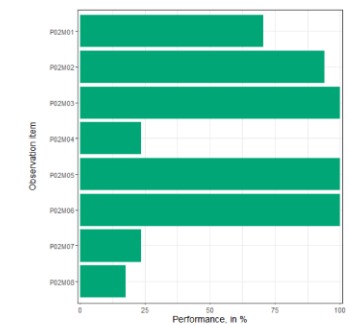
Circuit	Times Tested
R_X P01 P02 1k	19
R_X P01 DMM_VLO 1k	12
R_X P01 P02 10k	10

Circuit	Times Tested
R_X P01 P02 1k/R_X P03 P04 1k	9
R_X P01 DMM_VHI 1k/R_X P01 DMM_VLO 1k/W_X DC_COM GND	8
R_X P01 DMM_VHI 10k/R_X P01 DMM_VLO 1k	7
R_X P01 P02 10k/R_X P01 P02 10k/R_X P01 P02 1k	7
R_X P01 DC_25V 10k/R_X P01 DMM_VHI 10k/W_X DC_COM GND/W_X DMM_VLO GND	6
R_X P01 DMM_VHI 1k/R_X P01 DMM_VLO 1k	6
R_X P01 DMM_VHI 1k	5

### Work Indicators

#### Observation Items

##### Group Performance



##### Performance per User

Data Input

Global Results &lt;

Circuit-based Analysis &lt;

User-specific Results &lt;

Work Indicators

Data Download &lt;

Help &lt;

## Data Input

## Log File

Browse... 2014S1\_LogData\_Sample.csv

Upload complete

## Observation Items (optional)

Browse... 2014S1\_ObservationItems.txt

Upload complete

## Assessment Milestones (optional)

Browse... 2014S1\_AssessmentMilestones.txt

Upload complete

Log file loaded, details are shown below...

17

Users

1925

Actions

2014-02-11

First logged date

2014-02-27

Last logged date

Read 8 observation items

P02M01, P02M02, P02M03, P02M04, P02M05, P02M06, P02M07, P02M08

Read 3 assessment milestones

EVP01, EVP02, EVP03

Data Input

Global Results &lt;

Circuit-based Analysis &lt;

User-specific Results &lt;

Work Indicators &lt;

Data Download

Students's Data File

Help &lt;

## Data Input

## Log File

Browse... 2014S1\_LogData\_Sample.csv

Upload complete

## Observation Items (optional)

Browse... 2014S1\_ObservationItems.txt

Upload complete

## Assessment Milestones (optional)

Browse... 2014S1\_AssessmentMilestones.txt

Upload complete

Log file loaded, details are shown below...

17

Users

1925

Actions

2014-02-11

First logged date

2014-02-27

Last logged date

Read 8 observation items

P02M01, P02M02, P02M03, P02M04, P02M05, P02M06, P02M07, P02M08

Read 3 assessment milestones

EVP01, EVP02, EVP03

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	Alumno	TotalTime	NumCircu	NumExp	NumCCircu	NumNCircu	NumSCircu	NumMesE	NumMesC	NumMesV	NumMesR	EVP01	EVP02	EVP03	grades
2	14_203	3,13	78	78	54	31	30	4	0	0	74	VERDADERO	FALSO	VERDADERO	66,66666667
3	14_210	2,52	143	143	79	45	36	18	0	0	125	FALSO	FALSO	FALSO	0
4	14_303	2,81	51	51	39	29	27	9	0	0	42	VERDADERO	FALSO	VERDADERO	66,66666667
5	14_367	2,17	80	80	45	38	32	13	0	0	67	VERDADERO	VERDADERO	VERDADERO	100
6	14_380	3	141	141	55	44	37	38	0	18	85	VERDADERO	VERDADERO	VERDADERO	100
7	14_512	2,23	105	105	57	41	33	19	0	0	86	VERDADERO	FALSO	VERDADERO	66,66666667
8	14_536	2,46	83	83	42	33	31	7	0	0	76	VERDADERO	FALSO	VERDADERO	66,66666667
9	14_627	1,77	50	50	35	21	21	0	0	0	50	VERDADERO	FALSO	VERDADERO	66,66666667
10	14_744	2,27	67	67	36	22	21	11	0	0	56	VERDADERO	FALSO	VERDADERO	66,66666667
11	14_790	2,46	95	95	46	38	34	9	0	0	86	VERDADERO	FALSO	VERDADERO	66,66666667
12	14_808	2,5	72	72	51	33	25	22	0	0	50	VERDADERO	FALSO	VERDADERO	66,66666667
13	14_871	2,54	67	67	42	28	27	13	8	1	45	VERDADERO	VERDADERO	VERDADERO	100
14	14_884	1,8	64	64	25	21	15	30	0	1	33	VERDADERO	VERDADERO	VERDADERO	100
15	14_922	2,76	85	85	58	46	42	8	0	0	77	VERDADERO	FALSO	VERDADERO	66,66666667
16	14_924	2,42	46	46	40	26	25	2	0	0	44	VERDADERO	FALSO	VERDADERO	66,66666667
17	14_987	2,64	65	65	53	36	34	4	0	0	61	VERDADERO	FALSO	VERDADERO	66,66666667
18	14_990	2,13	66	66	46	28	28	1	0	0	65	VERDADERO	FALSO	VERDADERO	66,66666667

Students' data is downloaded as a spreadsheet file. It summarizes each user's work and shows the outcome of each assessment milestone. Grade is an average from the milestones scaled 0 to 100.

- VISIR/HIVE-DB installation
- Data input
- Exploring global results
- Analyzing the circuits
- Supporting specific students
- Mapping students' work
- Downloading a report and/or student's data
- **Getting help**

# Getting help

Data Input

Global Results &lt;

Circuit-based Analysis &lt;

User-specific Results &lt;

Work Indicators &lt;

Data Download

Help &lt;

## Data Input

## Log File

Browse... 2014S1\_LogData\_Sample.csv

Upload complete

## Observation Items (optional)

Browse... 2014S1\_ObservationItems.txt

Upload complete

## Assessment Milestones (optional)

Browse... 2014S1\_AssessmentMilestones.txt

Upload complete

Log file loaded, details are shown below...

17

Users

1925

Actions

2014-02-11

First logged date

2014-02-27

Last logged date

Read 8 observation items

P02M01, P02M02, P02M03, P02M04, P02M05, P02M06, P02M07, P02M08

Read 3 assessment milestones

EVP01, EVP02, EVP03

Data Input

Global Results &lt;

Circuit-based Analysis &lt;

User-specific Results &lt;

Work Indicators &lt;

Data Download &lt;

Help ▾

Dashboard Structure

Glossary of Terms

## Data Input

## Log File

Browse... 2014S1\_LogData\_Sample.csv

Upload complete

## Observation Items (optional)

Browse... 2014S1\_ObservationItems.txt

Upload complete

## Assessment Milestones (optional)

Browse... 2014S1\_AssessmentMilestones.txt

Upload complete

Log file loaded, details are shown below...

17

Users

1925

Actions

2014-02-11

First logged date

2014-02-27

Last logged date

Read 8 observation items

P02M01, P02M02, P02M03, P02M04, P02M05, P02M06, P02M07, P02M08

Read 3 assessment milestones

EVP01, EVP02, EVP03

Data Input

Global Results &lt;

Circuit-based Analysis &lt;

User-specific Results &lt;

Work Indicators &lt;

Data Download &lt;

Help

Dashboard Structure

Glossary of Terms

## Data Input

## Log File

Browse... 2014S1\_LogData\_Sample.csv

Upload complete

## Observation Items (optional)

Browse... 2014S1\_ObservationItems.txt

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## Assessment Milestones (optional)

Browse... 2014S1\_AssessmentMilestones.txt

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Log file loaded, details are shown below...

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Global Results &lt;

Circuit-based Analysis &lt;

User-specific Results &lt;

Work Indicators &lt;

Data Download &lt;

Help &gt;

Dashboard Structure

Glossary of Terms

## Data Input

## Log File

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## Observation Items (optional)

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## Assessment Milestones (optio

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## Dashboard Structure

This dashboard is divided into the following folders:

**Data Input**

Data loading and main information

**Global Results**

Global information about the time spent and the circuits performed by users

**Circuit-based Analysis**

Detailed information about each of the circuits performed

**User-specific Results**

Detailed information about the actions performed by each of the users

**Work Indicators**

Performance analyses of the group and per user

**Data Download**

Download of students' performance data

OK

1925

Actions

2014-02-27

Last logged date

, P02M07, P02M08

Read & assessment milestones  
EVP01, EVP02, EVP03

Data Input

Global Results &lt;

Circuit-based Analysis &lt;

User-specific Results &lt;

Work Indicators &lt;

Data Download &lt;

Help

Dashboard Structure

Glossary of Terms

## Data Input

## Log File

Browse... 2014S1\_LogData\_Sample.csv

Upload complete

## Observation Items (optional)

Browse... 2014S1\_ObservationItems.txt

Upload complete

## Assessment Milestones (optional)

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Data Input

Global Results &lt;

Circuit-based Analysis &lt;

User-specific Results &lt;

Work Indicators &lt;

Data Download &lt;

Help &gt;

Dashboard Structure

Glossary of Terms

## Data Input

## Log File

Browse... 2014S1\_LogData...

Upload com

## Observation Items (optional)

Browse... 2014S1\_Observati...

Upload com

## Assessment Milestones (optional)

Browse... 2014S1\_Assessme...

Upload com

## Glossary of Terms

**User:** A person who uses VISIR, can be a student or not**Date:** Day of the month or year in which the user interact with the client**Action:** User interactions with the client that generate a message on the server**Observation Item:** A priori steps in the resolution process and/or potential errors**Assessment Milestone:** Logical combinations of observation items to grade students' performance**Time:** Span of time from the user first action to the current interaction with VISIR; large gaps in time between consecutive actions are discounted**Timeline:** Sequence of actions distributed over time**Experiment:** A circuit and its instrumental settings, as performed when interacting with VISIR**Circuit:** Set of electrical components as placed and connected in the breadboard**Normalized Circuit:** Standardization of a circuit to achieve identical representations for circuits with the same components connected in the same manner**Simplified Circuit:** Standardization of a circuit to achieve identical representations for circuits with the same components connected in the same manner in the fragment being measured**Measure:** Each of the possible magnitudes that can be determined in a circuitAdditional information can be found at <http://asistembe2.iqs.edu/visitr/index.htm>.

OK

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Actions

2014-02-27

Last logged date

P02M07, P02M08