
VBoard

Web dashboards in 3D and VR

Máster en Ingeniería de Telecomunicación
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Content

Introduction

Context

Development

Results

Conclusions

Introduction

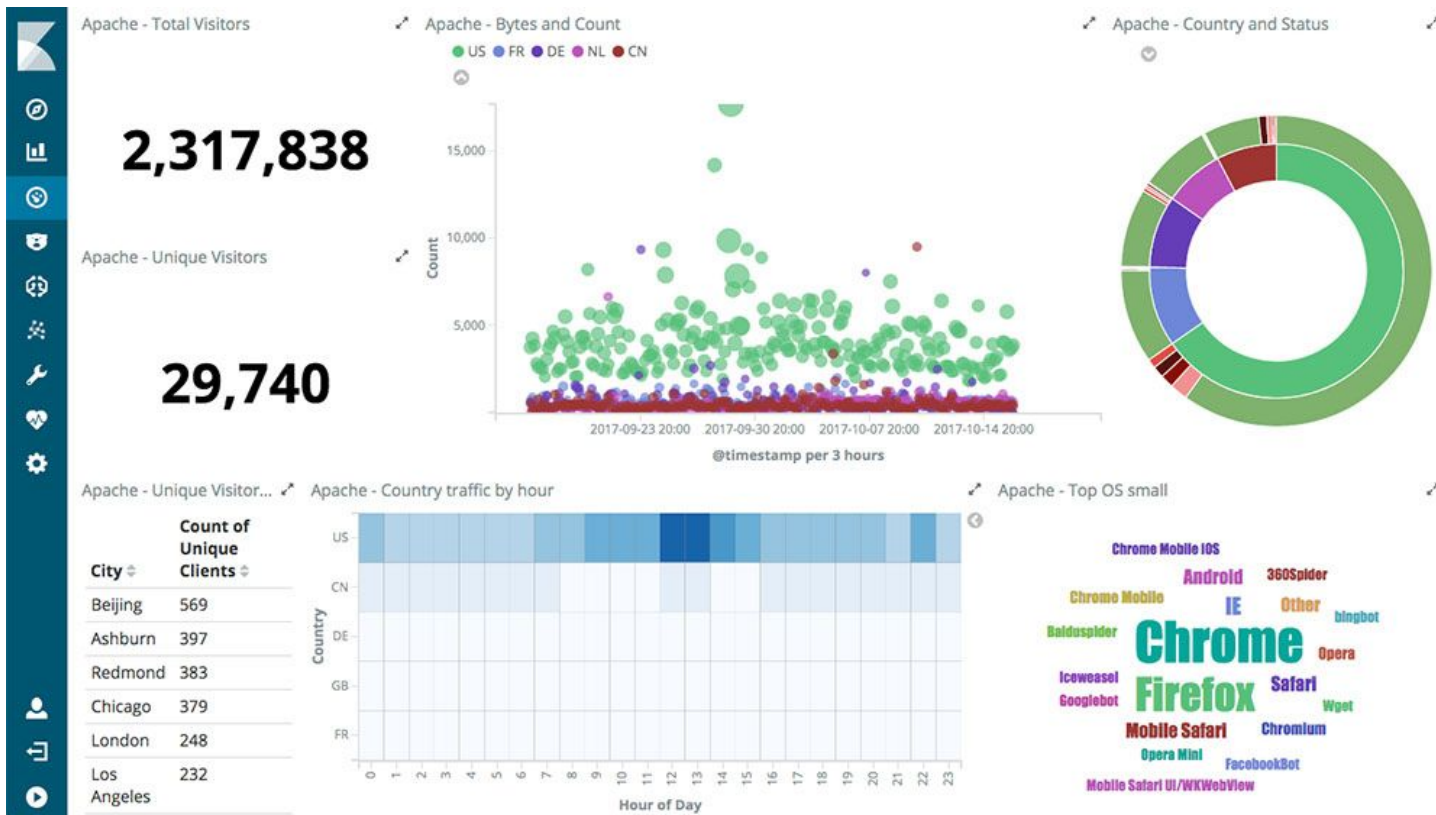
Big amount of data

Data visualization

Tools of data visualization

New environments, **3D and Virtual Reality (VR)**

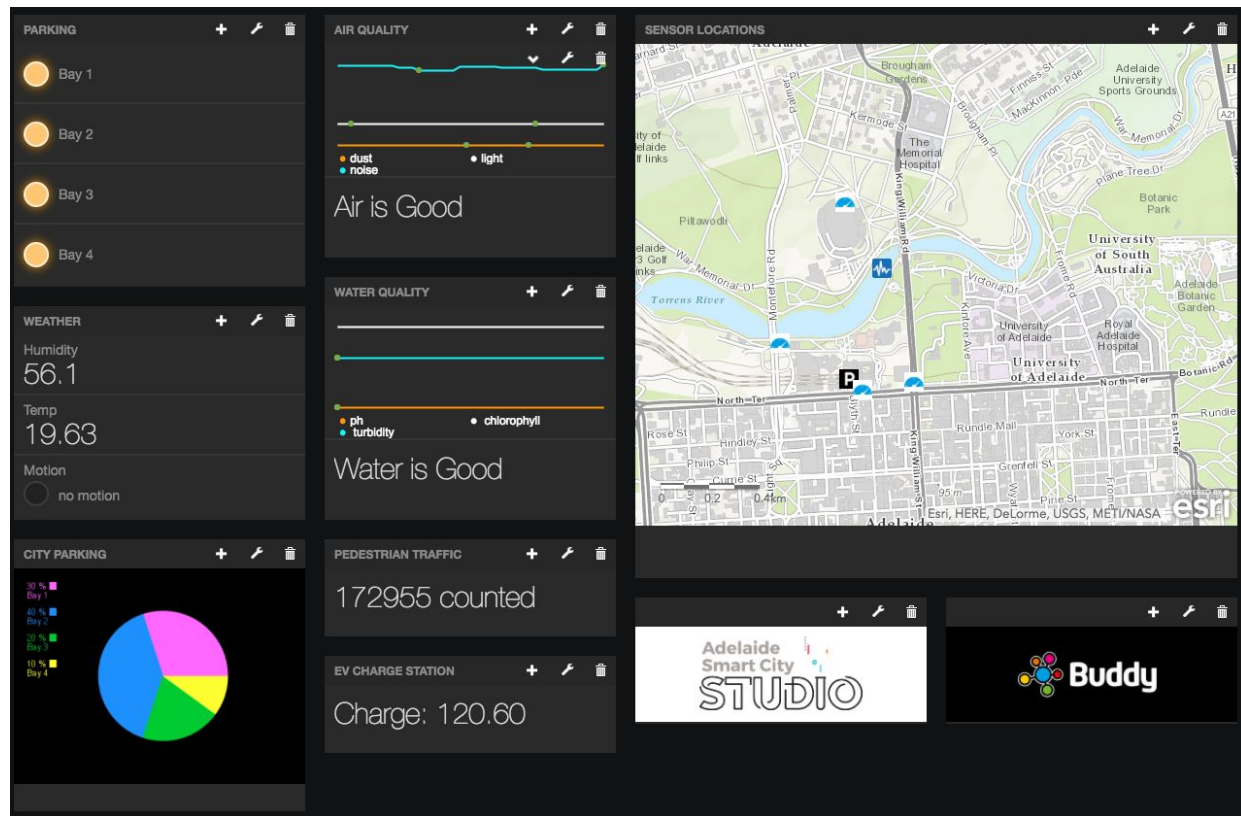
Kibana



Grafana



Freeboard



Development of a complex system of data visualization in 3D and VR

Analysis and choice of a visualization library

Analysis and choice of web development framework

APIs search and development

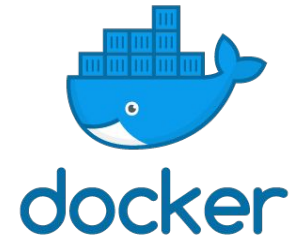
Development of a simple and useful interface

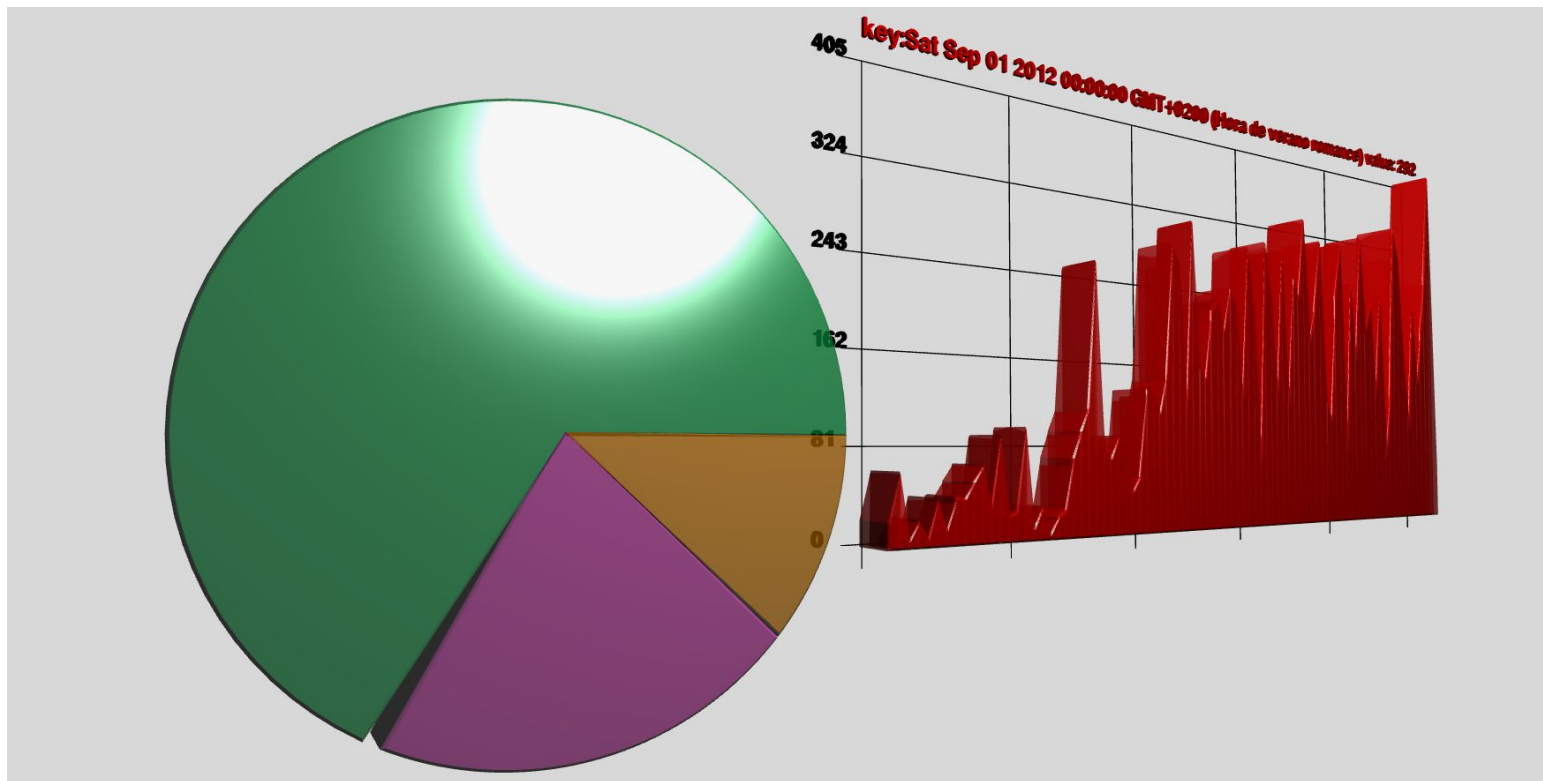
Definition of the platform and index objects in Elasticsearch for its later saving

Dashboard view and integration of VR

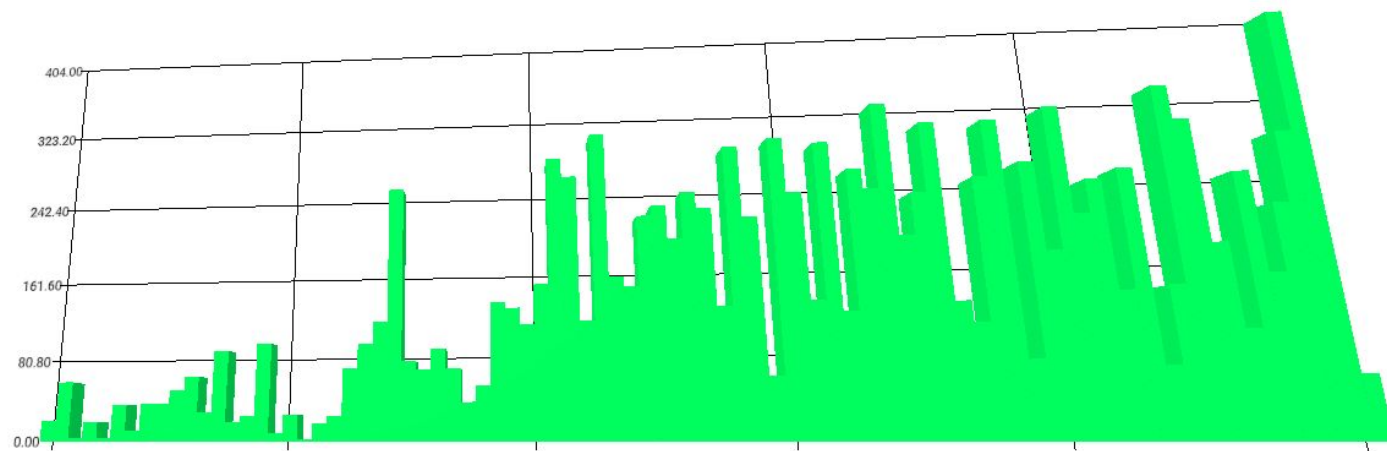
Creation of Docker image

Context





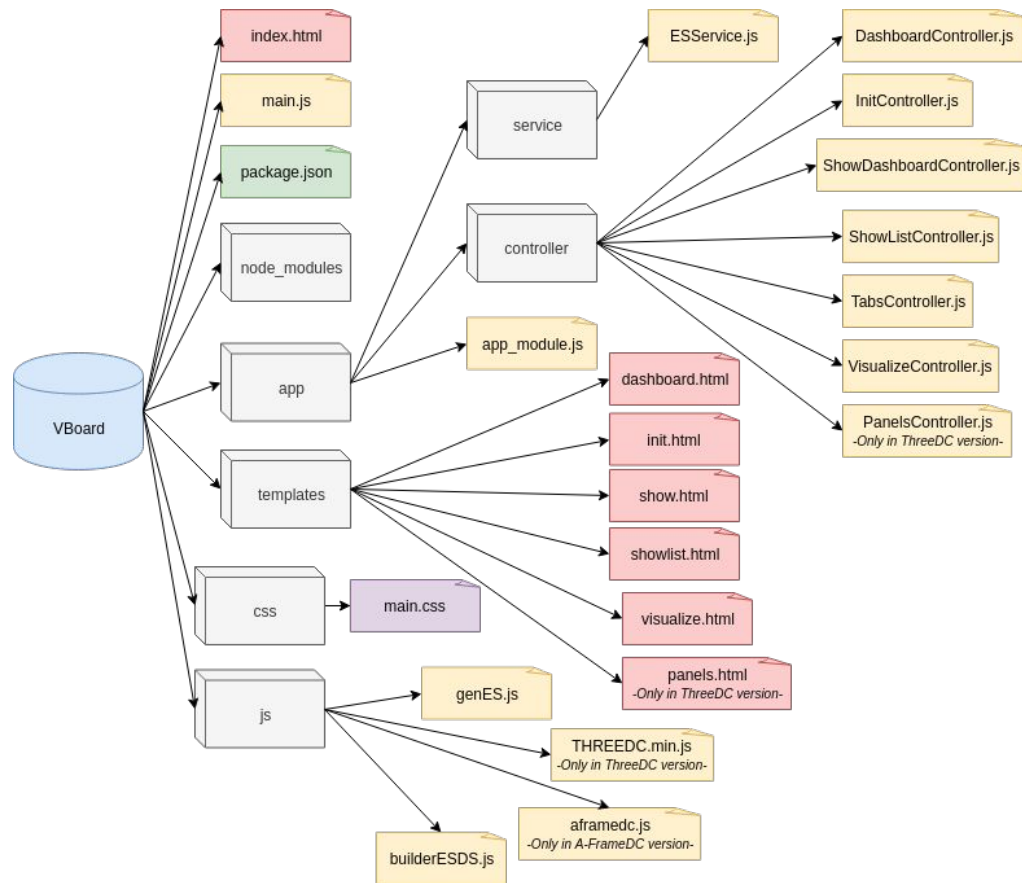
/aframeDC



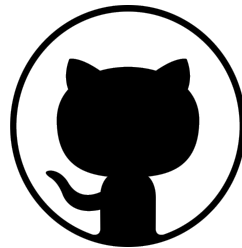
Development

Results

/structure



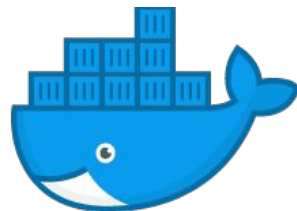
Repository



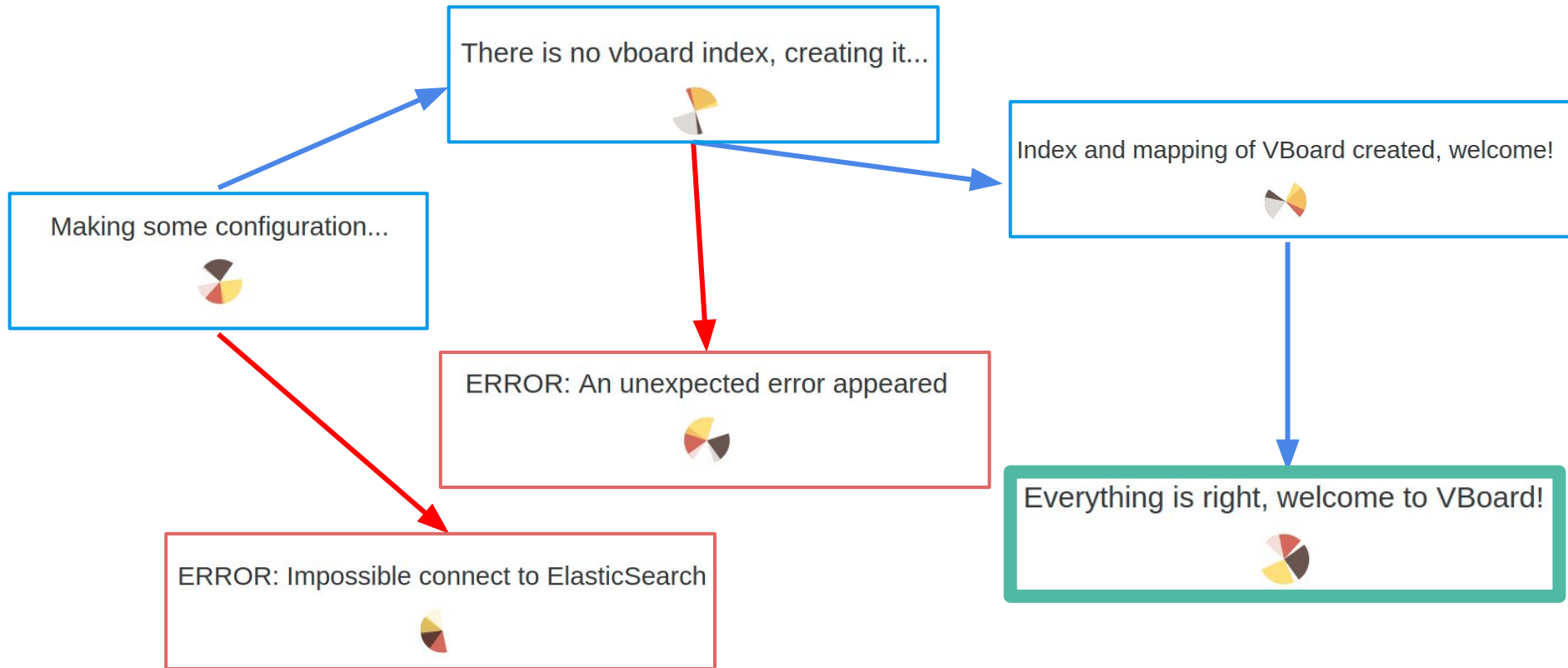
Releases



Docker



/init



VBoard

Visualize

Dashboard

Show

Index:

git

Type:

items

Show Mapping

Select chart

VisType:

Pie

Select Data

Cancel

Metrics:

Principal metric

Type:

Count

Buckets:

Principal bucket

Type:

Terms

Field:

Author_name

Size:

5

Play

Cancel

Show response (JSON)

Save visualization

Load visualization

VBoard

Visualize

Dashboard

Show

Index:

git

Type:

items

Show Mapping

Select chart

VisType:

Pie

Select Data

Cancel

Metrics:

Principal metric

Type:

Count

Buckets:

Principal bucket

Type:

Terms

Field:

Author_name

Size:

5

Play

Cancel

Show response (JSON)

Save visualization

Load visualization



Switch background



VBoardVisualizePanelsDashboard

Click to add:

tarta
la tarta

pie

bubbles0
fivefww

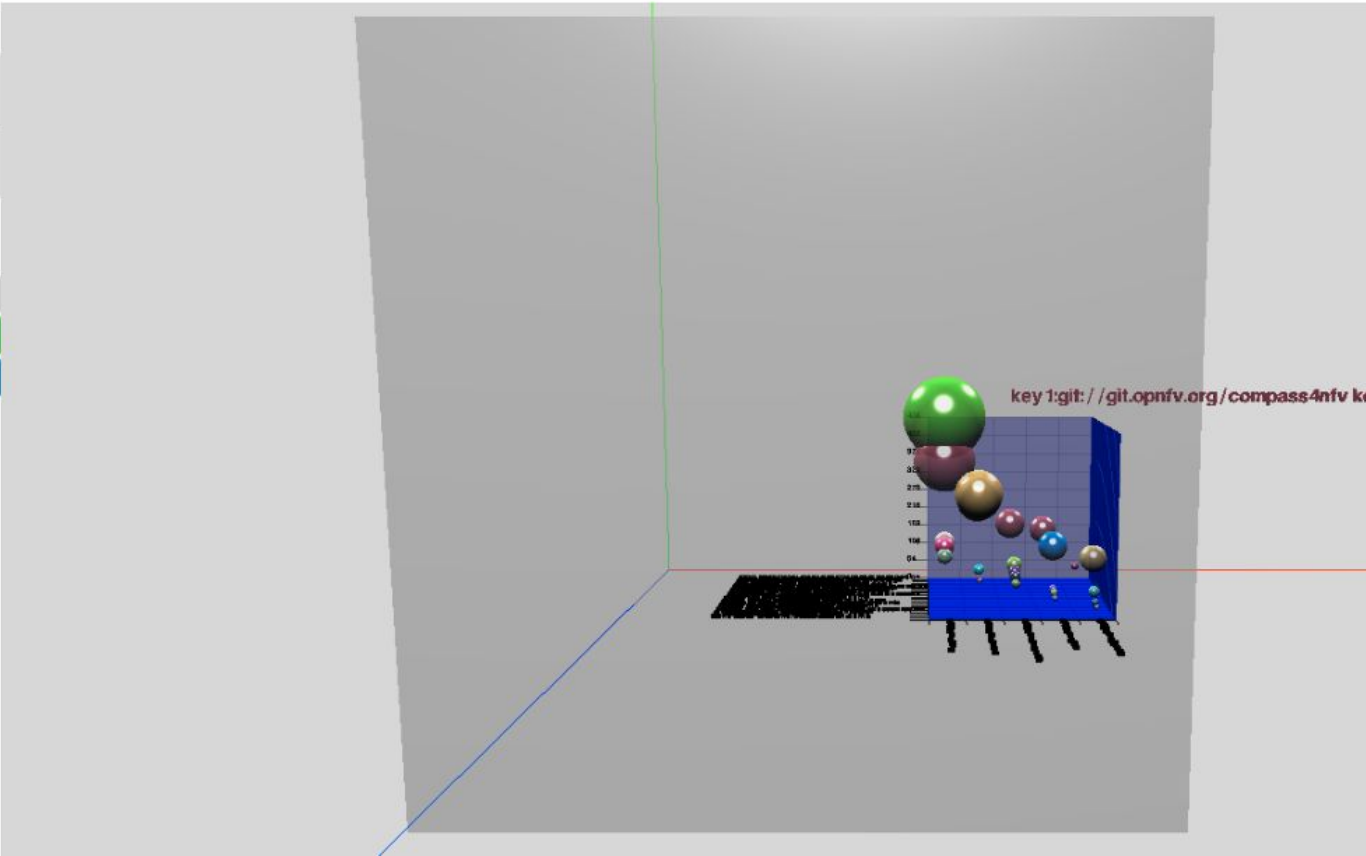
bubbles

Options:

New Panel

Save Panel

Load Panel



A 3D visualization of a data set, likely a scatter plot or a visualization of a complex structure. The visualization is displayed in a 3D coordinate system with a blue grid. The data points are represented by colored spheres of varying sizes. A red line is visible in the background, possibly indicating a specific axis or boundary. The visualization is titled "key 1:git:/git.opnfv.org/compass4nfv k".

Click to add vis:

author in repo n commits 3D bar chart that shows the number of commits in repositories	3DBars
Organizations, number of lines changed Pie that shows the sum of lines changed that them did	pie
Number issues of organization repo Bubbles chart that shows the number of issues of each organization in each repository	bubbles
Issues vs time Number of issues weekly	curve
Commits vs time Number of commits vs time	curve
Commits vs time Authors commits during time	3DBars
Most talkative persons most 20 talkative persons on pie	pie
Messages channel	bars

Options:

- Save Dashboard
- Load Dashboard

/dashboard

VBoard Visualize Dashboard Show

Switch background

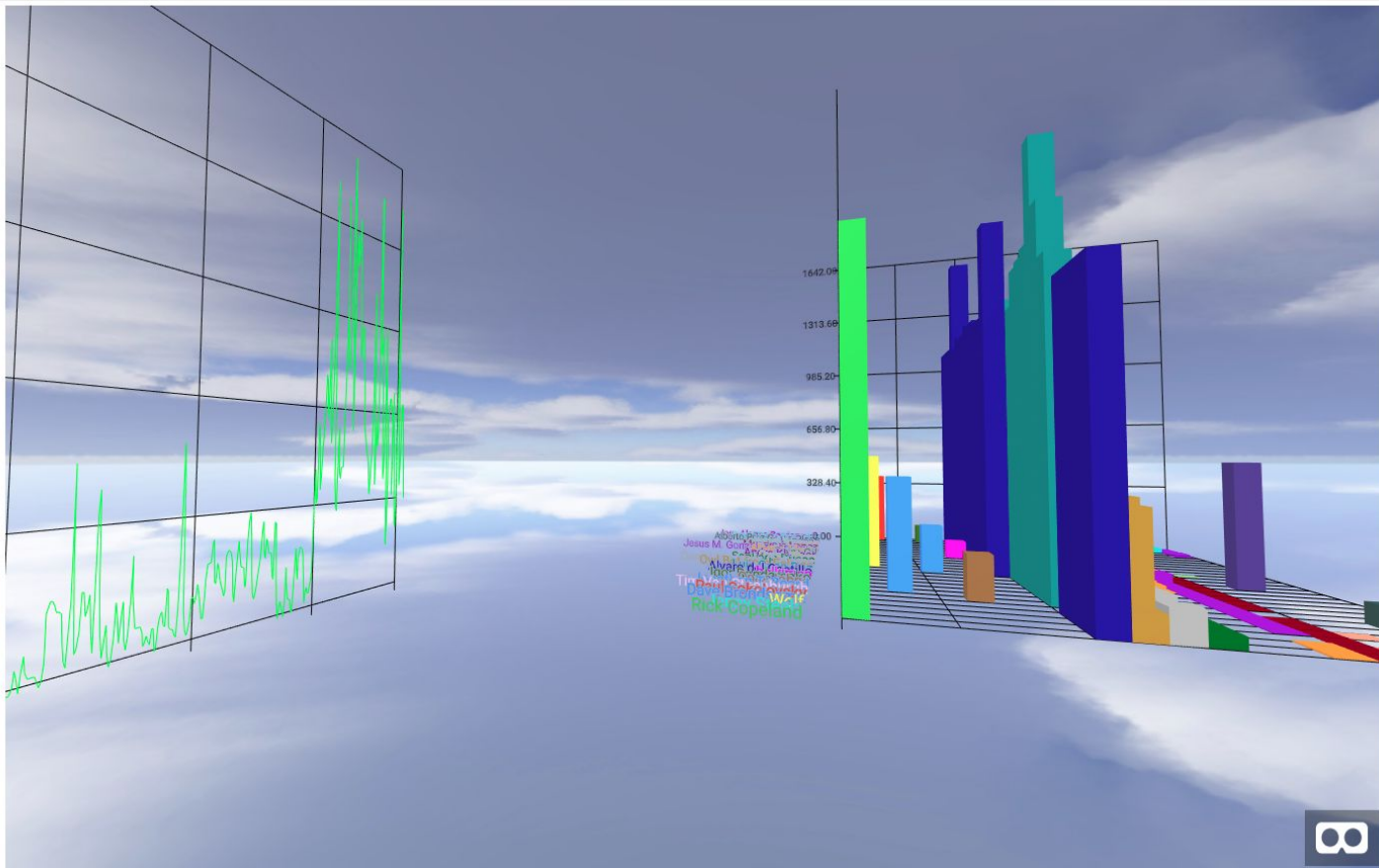
Click to add vis:

- author in repo n commits **3DBars**
3D bar chart that shows the number of commits in repositories
- Organizations, number of lines changed **pie**
Pie that shows the sum of lines changed that them did
- Number issues of organization repo **bubbles**
Bubbles chart that shows the number of issues of each organization in each repository
- Issues vs time **curve**
Number of issues weekly
- Commits vs time **curve**
Number of commits vs time
- Commits vs time **3DBars**
Authors commits during time
- Most talkative persons **pie**
most 20 talkative persons on pie
- Messages channel **bars**

Options:

Save Dashboard

Load Dashboard



Click to show the dashboard:

Git and Issues Bitergia

This dashboard shows data related to the git (commits) and issues of the Bitergia company

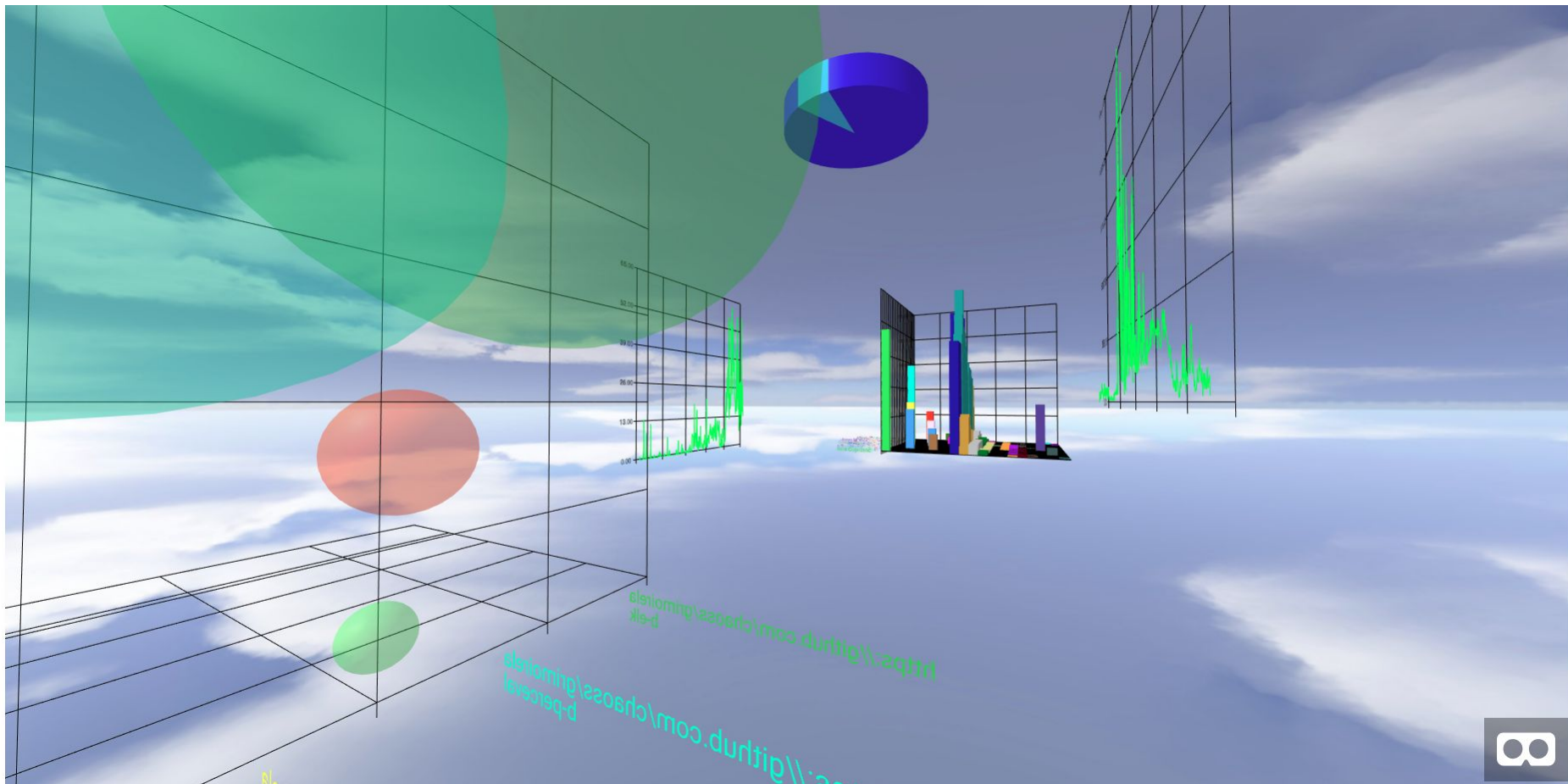
5 charts

Dashboard with one visualization

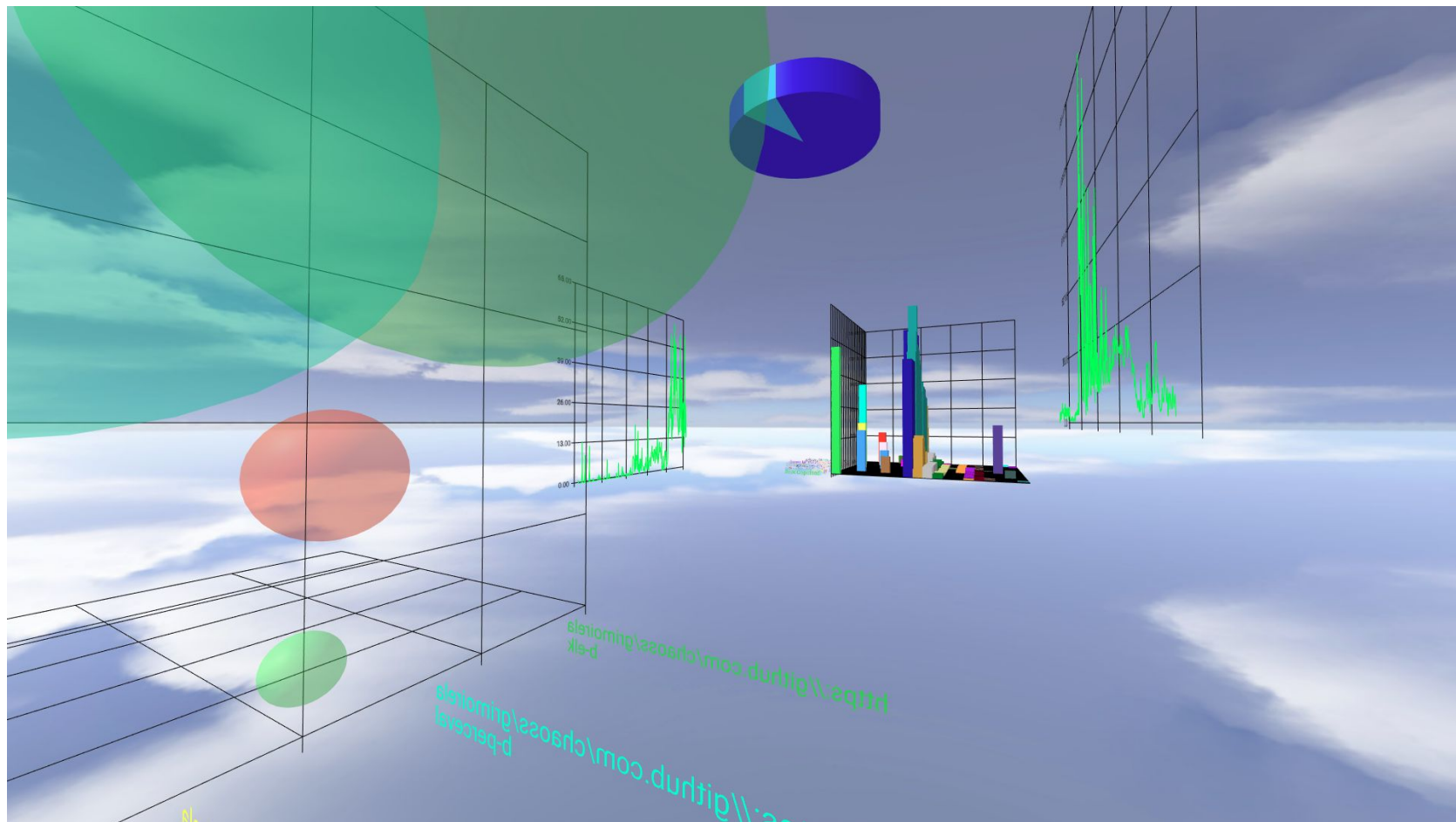
Dashboard with just 1 visualization

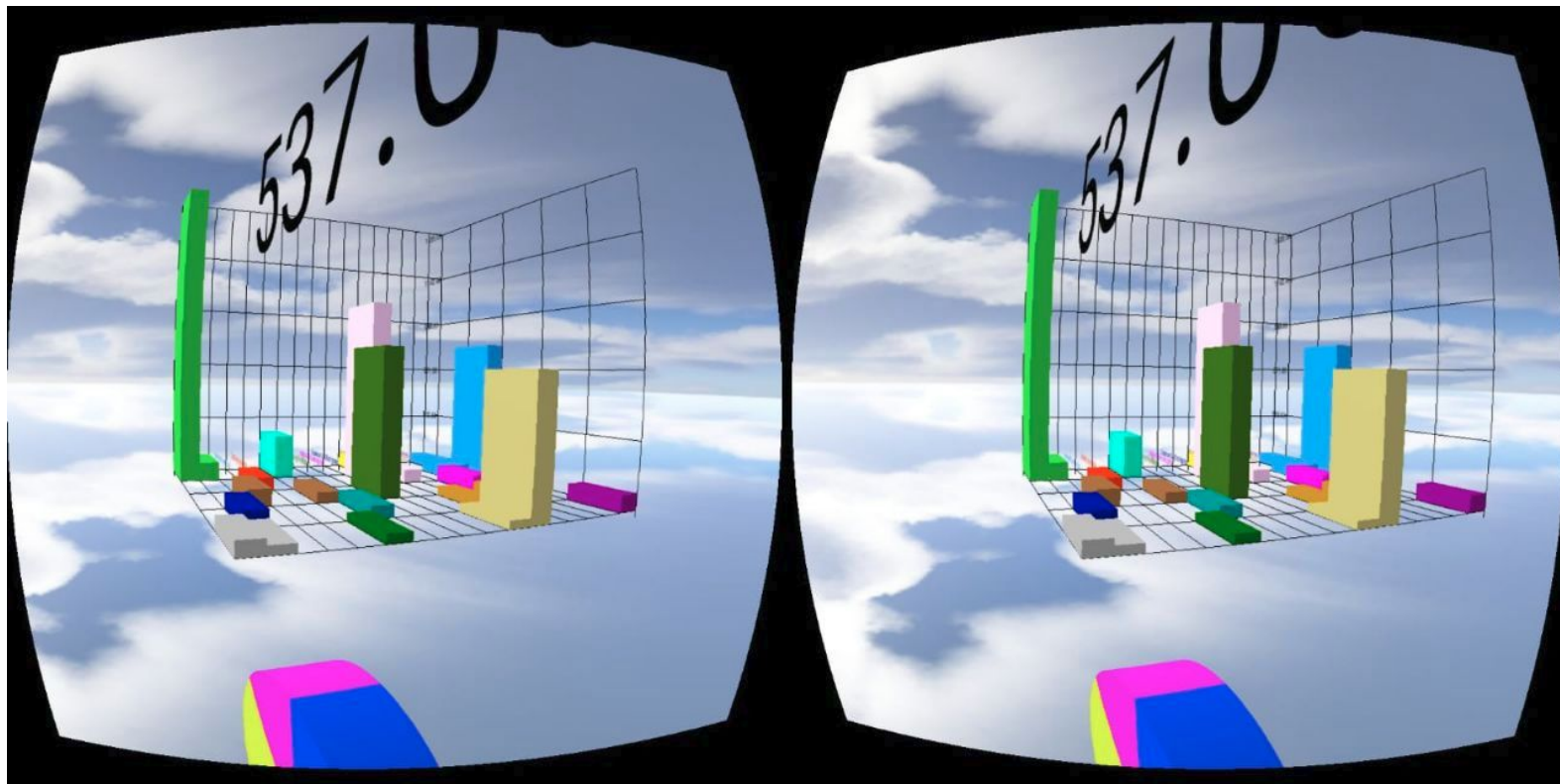
1 charts

/stand_alone



/full_screen





** Optimized for smartphones and Oculus Go*

All the carried out tests in the previous section one have been done with a group of data offered by the product owner (the tutor, in this case); these data correspond to logs with information of commits of repositories and it has been imported using Elasticdump.

VBoard is hosted on GitHub: <https://github.com/dlumber/VBoard>

GPL-3.0 License

README.md with general information and installation steps

USER_GUIDE.md with the user guide of the application

Docker images on Docker-hub: <https://hub.docker.com/r/dlumber/vboard/>

dlumber/vboard:afamedc for the A-FrameDC version

dlumber/vboard:threedc for the ThreeDC version

Demo

Conclusions

A group of people are silhouetted against a large window, sitting at a table and looking out at a city skyline. The most prominent building in the background is St. Paul's Cathedral, with its large dome and classical architecture. Other buildings of varying heights and styles fill the rest of the view. The scene is dimly lit, with the primary light source being the natural light from the window, which creates the silhouettes of the people in the foreground.

Thank you!