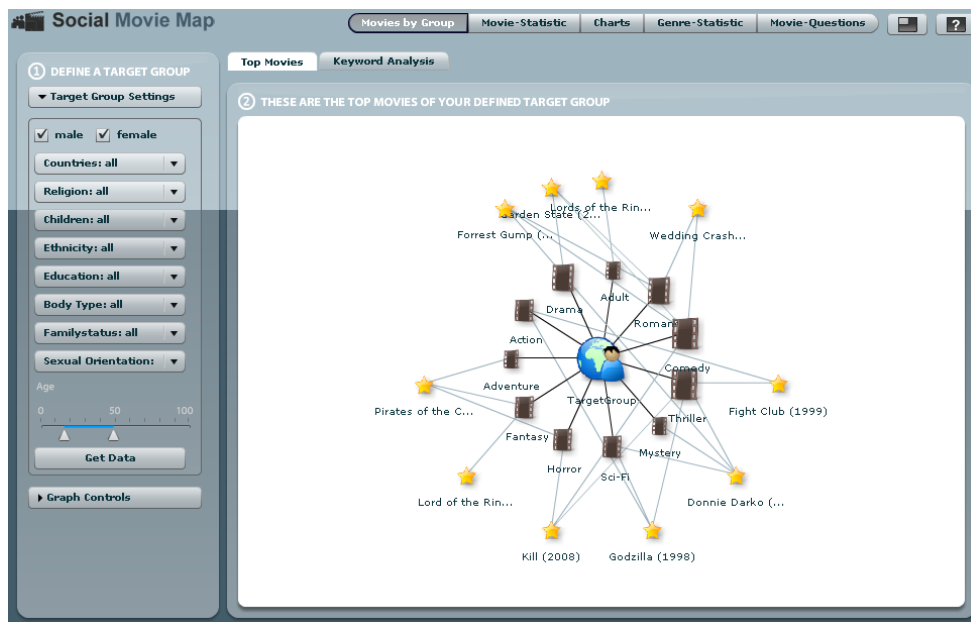


Social Movie Map

- User Guide -



an Open Source web application
by Philipp Bender & Florian Wilhelm

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Introduction

“Social Movie Map” is an OpenSource project.

It is part of a student research project for the subject "Media-Management & -Production" by Prof. Hendrik Speck, University Of Applied Sciences Kaiserslautern, Germany.

It was developed by Philipp Bender and Florian Wilhelm.

The web application “Social Movie Map” is embedded into a HTML-page, which contains additional information about the project, link to this documentation as well as an imprint and contact information about the developers.

However this documentation deals with not with the HTML content but is concerned with operating the embedded flash file.

Basic Screen-Layout

The application is primary divided in two parts (Figure 1):

1. Main navigation
2. Content area

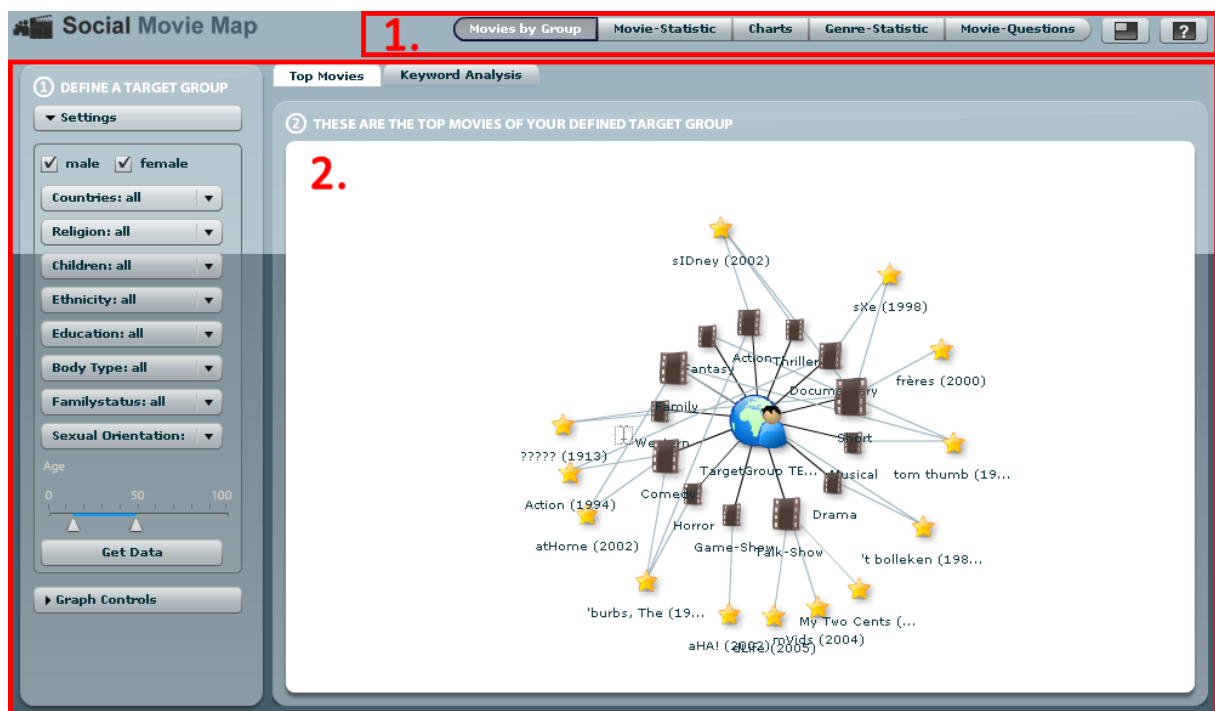


Figure 1: Division of application screen in main navigation (1) and content area (2).

Main Navigation



The main navigation can be found at the right hand side of the head. Itself is sectioned into

- **Button Bar** to navigate to all subpages of the application. If “Social Movie Map” is launched the first button to the first page (“Movies by Group”) is preselected.



Figure 2: Main Navigation Button Bar

Following sub-page can be reached over the button bar:

- Movies by Group
 - Movie Statistic
 - Charts
 - Genre-Statistic
 - Movie-Questions
-  **Fullscreen Button** for switching between the windowed and the fullscreen mode. In fullscreen mode the Flash-application uses the full available screen resolution without showing the surrounding HTML-content
 -  Because the Flash-application can be separated from the HTML-site (which contains the copyright information) the **Info Button** shows a popup (Figure 3) within the Flash-file with basic information about the project and a weblink to the project related Source Forge page.

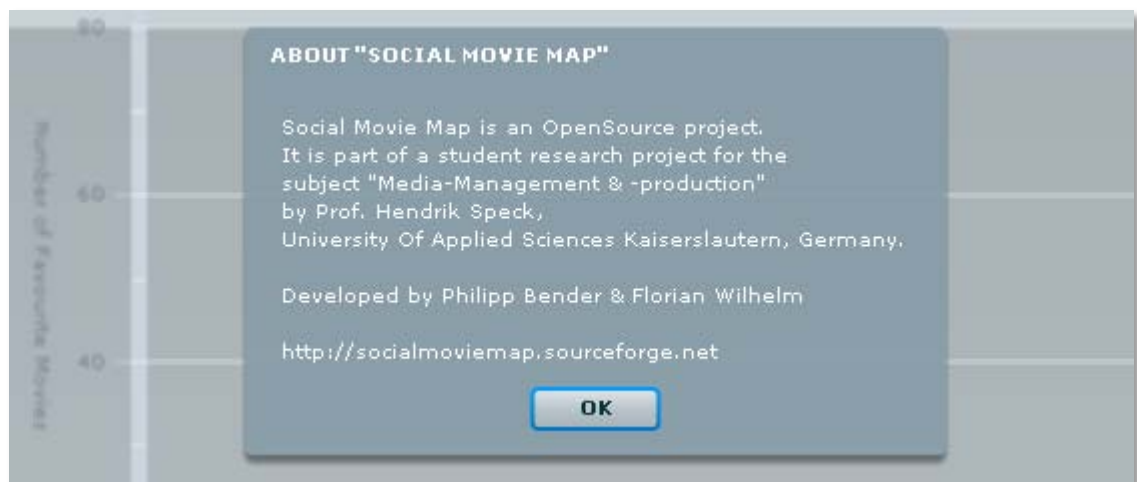


Figure 3: Pop-up is shown when select the Info-Button

Content Area

The content area is a non-static area, where the subpages will be shown. If a different page is selected in the main-navigation, the shown subpage in the content area changes and shows the new page. Every subpage has an own but mostly similar style and is again separated in different areas.

The specific subpage layout is explained in the appropriate chapter.

To increase the usability and provide an intuitive work-flow all subpages use workflow indicators in terms of numeration (in the upper left corner of an operating element)

Every number represents a single step in the workflow process of each subpage.

Furthermore on some pages there are also advisory labels, which are shown if previous workflow steps not yet accomplished. These advisory labels will be replaced by the results when previous steps are completed.

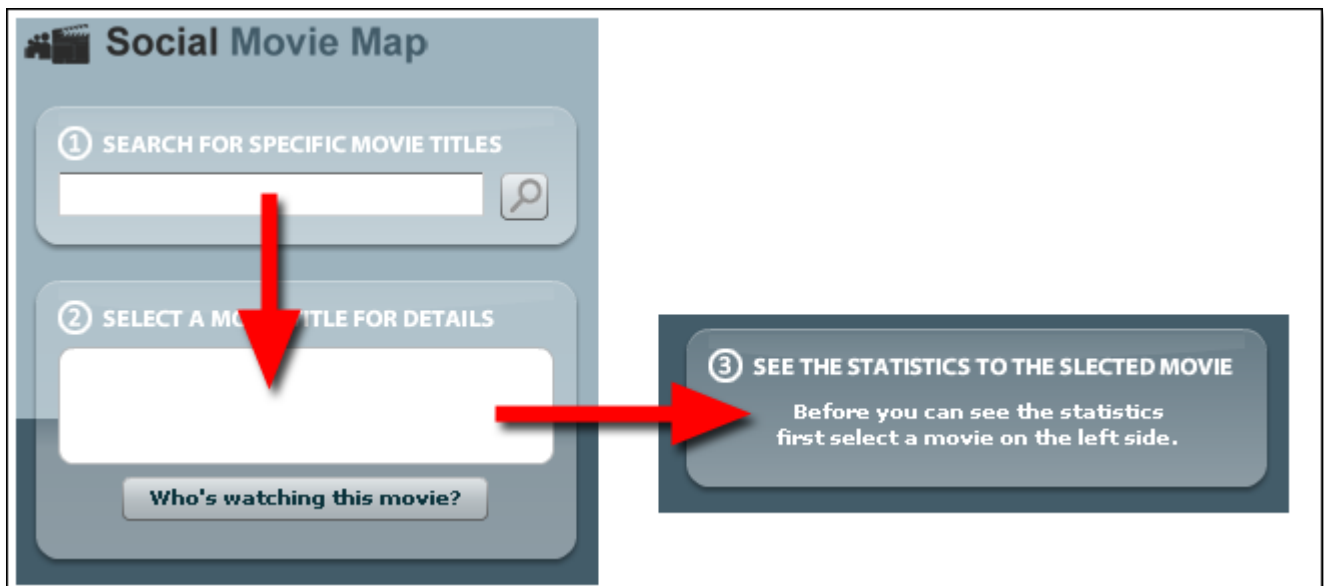


Figure 4: 1+2 are workflow indicators as numbers in operating elements, 3 is a replaceable advisory label

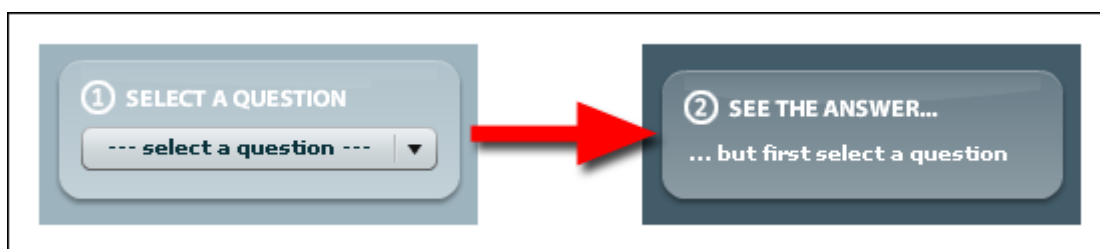


Figure 5: 1 is a workflow indicators as number in operating element, 2 is a replaceable advisory label

Page 1 – Movies by Group

“Movies by Group” is the preselected start page of the application. Two functionalities are supported: the search for Top-Movies and for the movie related Top-Keywords, both for a self defined target group.

The Layout is separated in three parts (Figure 6):

- I. a definition area, which contains an input form for defining the target group and a control panel for the top movie graph
- II. the result area, which shows depending on the selected mode a top-movie graph or a keyword treemap
- III. tab navigator for switching between top-movie and top-keyword mode

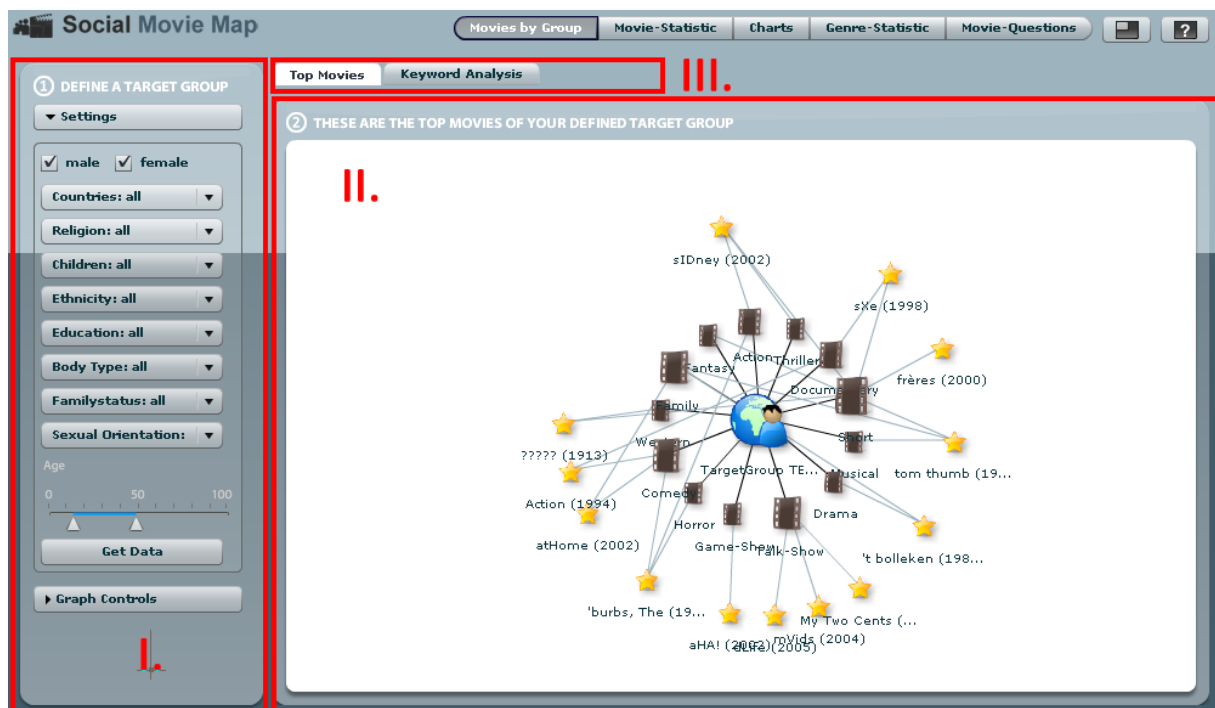


Figure 6: "Movies by Group"-Layout is separated in definition area (I), result area (II) and mode switcher (III)

Definition Area

The primary function of the definition area is to define a target group.

For the configuration of the target group it serves multiple drop down menus, checkboxes and an age slider, which can be selected by the user (Figure 7).

By selecting the “Get Data” button, a SQL query with the chosen parameters will be sent to the database. The query result will be shown as Top-Movie Graph or Keyword-Treemap (depending on the selected mode) in the result area. All settings of the target group selection box apply to the Top-Movie mode as well as to the Keyword mode.



Figure 7: Target Group Settings

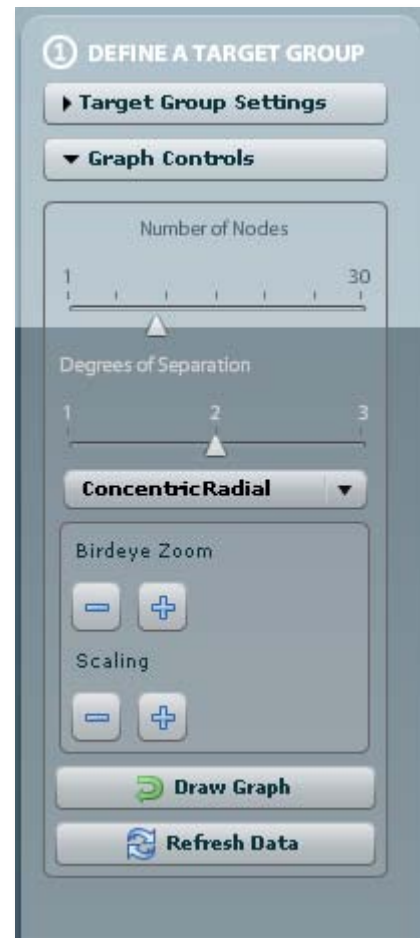


Figure 8: Graph Control

The following attributes for target group-selection can be specified:

Form Field	Attributes	Available Values	Field Type
<input checked="" type="checkbox"/> male <input checked="" type="checkbox"/> female	Gender	- male - female - both	Checkbox
Countries: all ▼	Country	- All Countries - Germany - Austria - France - Italy - Spain - United Kingdom - United States - ...and 230 further countries, states or institutions ordered by name	ComboBox
Religion: all ▼	Religion	- All religions - Agnostic - Atheist - Buddhist - Catholic - Christian - other - Hindu - Jewish	ComboBox








		<ul style="list-style-type: none"> - Mormon - Muslim - Other - Protestant - Scientologist - Taoist - Wiccan 	
	Children	<ul style="list-style-type: none"> - Children: all - I don't want kids - Love kids, but not for me - Undecided - Someday - Expecting - Proud parent 	ComboBox
	Ethnicity	<ul style="list-style-type: none"> - Ethnicity: all - Asian - Black / African descent - East Indian - Latino / Hispanic - Middle Eastern - Native American - Pacific Islander - White / Caucasian - Other 	ComboBox
	Education	<ul style="list-style-type: none"> - Education: all - High school - Some college - In college - College graduate - Grad / professional school - Post grad 	ComboBox
	Body Type	<ul style="list-style-type: none"> - Body Type: all - Slim / Slender - Athletic - Average - Some extra baggage - More to love! - Body builder 	ComboBox
	Family Status	<ul style="list-style-type: none"> - Familystatus: all - Single - In a Relationship - Engaged - Married - Divorced - Swinger 	ComboBox
	Sexual Orientation	<ul style="list-style-type: none"> - Sexual Orientation: all - Straight - Bi - Gay/Lesbian - Gay - Lesbian - Not Sure 	ComboBox
	Age	<ul style="list-style-type: none"> - Ages from 0 to 100 - every possible age range 	Slider Control with 2 thumbs

Table 1: Attributes of Target Group Settings

The second functionality of the definition area on the application's start page is the control of the Top-Movie graph (Figure 8). There are several options for manipulate the shown graph and to change its graphical representation.

The Graph control has no effect on form and content presentation of the Keyword Treemap.

The following attributes graph control can be specified:

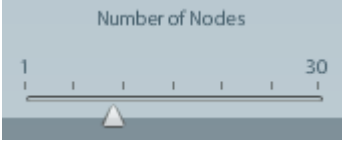
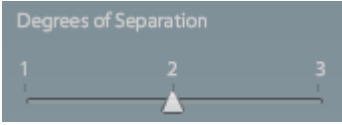


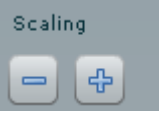
Form Field	Available values	Description
 <p>Number of Nodes</p> <p>1 30</p>	Number of nodes - 1 to 30 nodes available - default value: 10 nodes	Number of nodes shows number of number of Top-Movies. The default value shows the Top10 movies of the selected target group.
 <p>Degrees of Separation</p> <p>1 2 3</p>	Degrees of Separation - degree 1 to 3 available - default value: 2	Degrees of Separation change the shown graph depth.
 <p>ConcentricRadial</p>	Diagram mode - Concentric Radial (default) - Single Cycle Circle	graphical placement of nodes and leafs in the diagram
 <p>Birdeye Zoom</p> <p>- +</p>		Zoom in/out
 <p>Scaling</p> <p>- +</p>		Scales the node and leaf labels

Table 2: Attributes of Graph Control

Result Area

Depending on the selected mode (top-movies / top-keywords) here the results of the target group search is presented.

Top-Movie Graph

Is the top-movie mode active, the result area shows an interactive graph (Figure 9) with the top-movies of the selected target group. The following graph elements will be used:




	Target Group <ul style="list-style-type: none"> - represents the selected target group
	Genre <ul style="list-style-type: none"> - represents a single genre - is part of a target group - contains one or more top movies - the larger the icon the more top movies contained
	Movie <ul style="list-style-type: none"> - represents a single Top Movie - is part of one or more genres

Table 3: graph elements

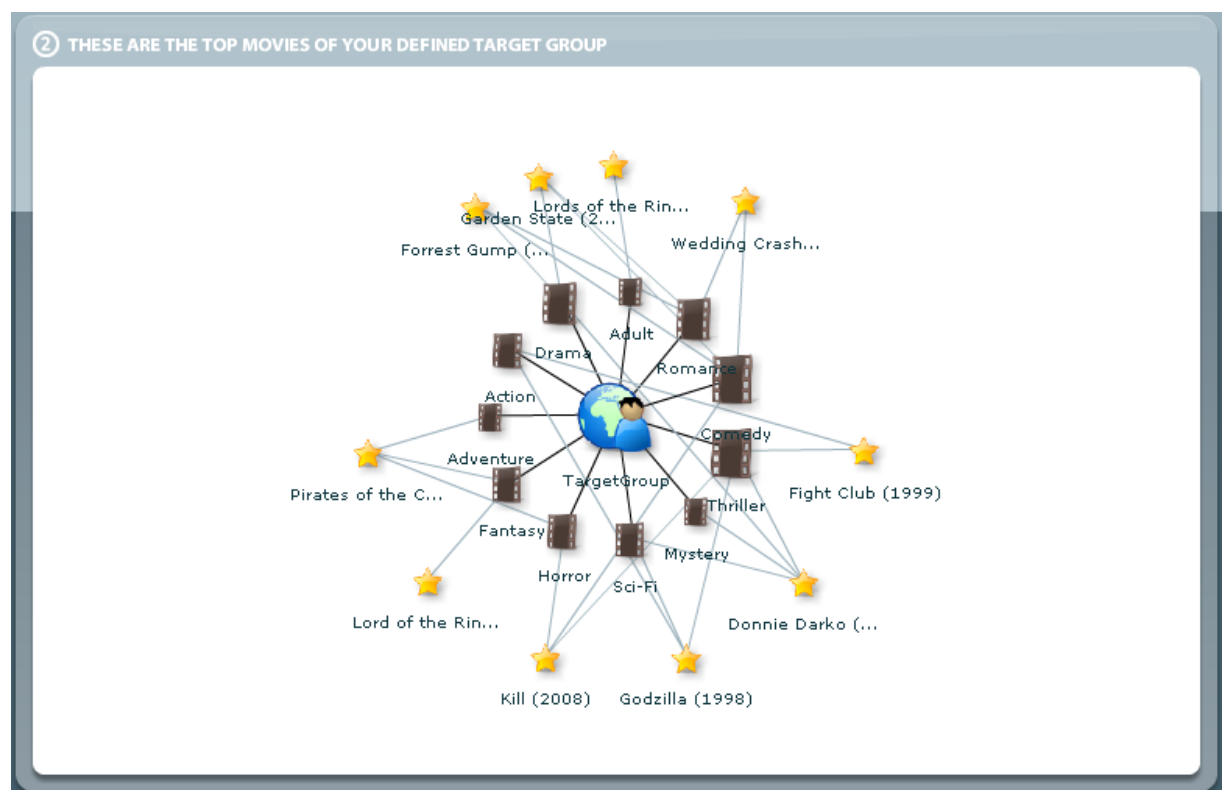


Figure 9: Top Movie Graph

Every element has a label and – when holding the mouse over the item – a tooltip that provides further information, for example for movies: runtime, IMDB-ranking, votes for the movie in MySpace and so on.

By default a “Concentric Radial” visualization is preselected. This means that the target group is the central point of the diagram. It shows in depth level 1 all genres of the top movies of this group. Because a movie can be part of more than one genre, it is possible that more genres are shown than to movies. The larger a genre icon the more movies are part of this genre.

In depth level 2 there are the top movies. The thin grey lines show, what genres they are part of.

By double clicking on a item, this item will be the central point of the diagram and the related connections for this item are shown. In Figure 10 the genre “Sci-Fi” is central item of the diagram, in Figure 11 it is the movie “Donnie Darko”

Depending on the degree of Degrees of Separation more or less data will be shown.

The number of shown top movies is depending on the number of nodes in Graph Control. The default value is 10, which means that the Top10 movies are shown.

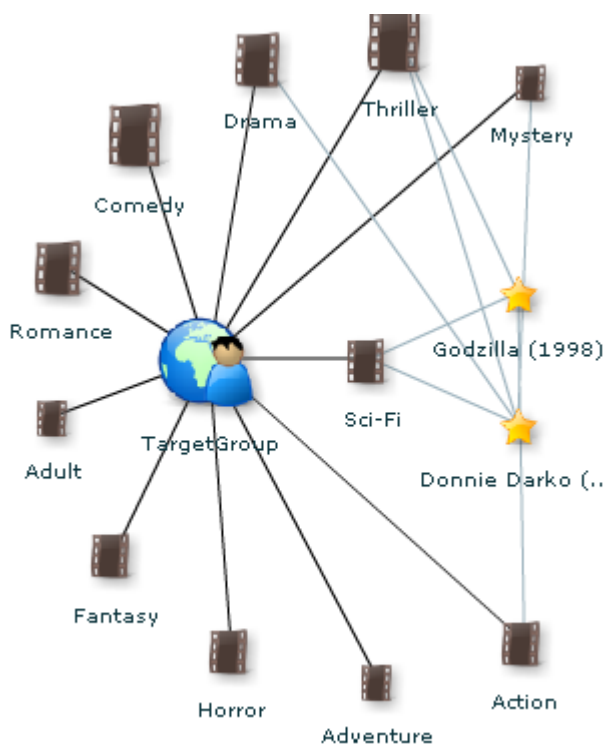


Figure 10: Genre "Sci-Fi" is central element

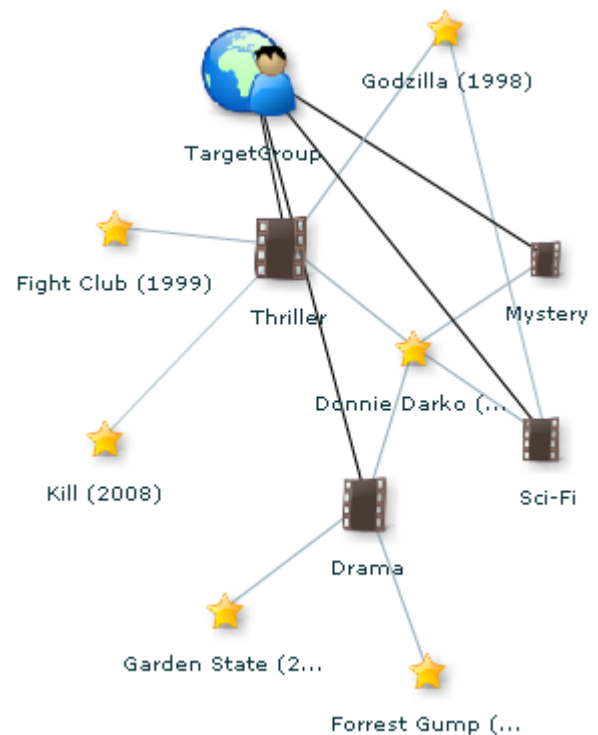


Figure 11: Movie “Donnie Darko” is central element

Top-Keyword Treemap

Treemapping is a method for displaying tree-structured data using nested rectangles. A leaf node's rectangle has an area proportional to a specified dimension on the data.

This treemap shows the Top15 keywords appearing in all movies stated by the target group. The frequency of occurrence of a keyword is symbolized by the size of its rectangle within the treemap.

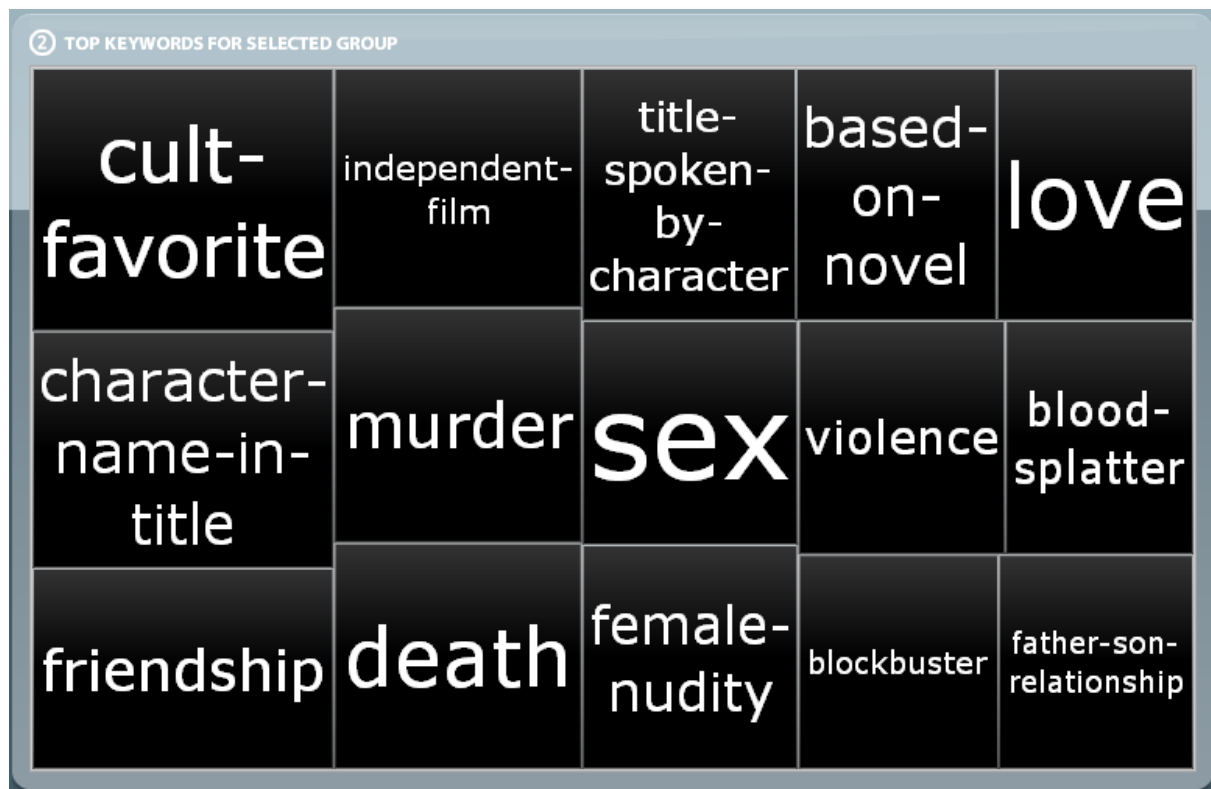


Figure 12: Top-Keyword Treemap

Tab Navigation

The tab-navigation (Figure 13) provides the two main functionalities of this site:

- “Top-Movie”-mode, which shows the Movies-Graph in the result area
- “Keyword Analysis”-mode, which shows the Keyword-Treemap in the result area



Figure 13: Tab-Navigation

At the beginning “Top Movies” is preselected.

Page 2 – Movies Statistic

“Movie Statistic” is the second page of this application (see Figure 2).

The main functionality of this page is to show static charts and analysis, which are related to a single movie. Basically this is the inverse functionality of the “Movie by Group”-page. The user can select a movie and gets information who or, which group watches this movie.

Due to the quantity of information the results are split in four subpages, which can be accessed by using the Subpage Tab Navigator

The Layout is separated in four parts (Figure 14):

- I. a text input field for searching for movies containing the entered text
- II. Movie List, which contains the result of the movie search
- III. Statistic Area for all statistics of the in (II) selected movie
- IV. Tab-Navigator to switch between the different result subpages

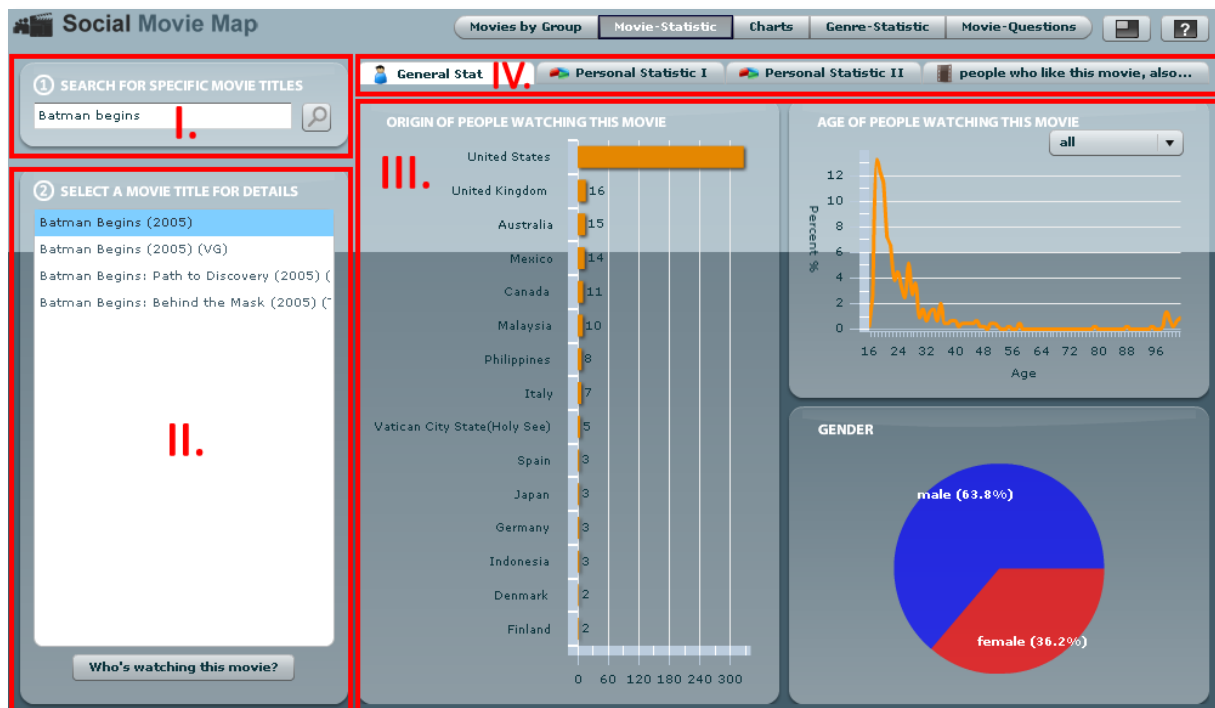


Figure 14: "Movie Statistic"-Layout is separated in Movie Search Input (I.), Movie List (II.), Statistic Area (III.) and Subpage Tab Navigator (IV.)

Movie Search Input

The Movie Search Input is a simple text input field (Figure 15). User can enter a single word, multiple words or even a part of a word (not case sensitive). The input will be compared with the all movie titles of the IMDB movie database. On match, the results will be shown in the Movie List.



Figure 15: Movie Search Input Field

To send a text input, the user can either select the search button on the right side of the input field or just simply hit the enter key. If no text was put in, the user see a warning tooltip (Figure 16)

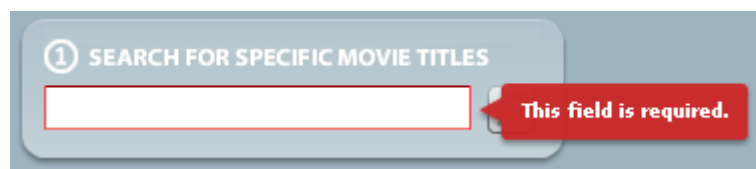


Figure 16: Warning tooltip, if no text was put in

Movie List

Here are all movies listed that match with the previous input in the Movie Search Input. The list is primary ordered by amount of IMDB votings and secondary by IMDB-rank to promote more popular movies.



Figure 17: all movies as result in the Movie List (with tooltip)

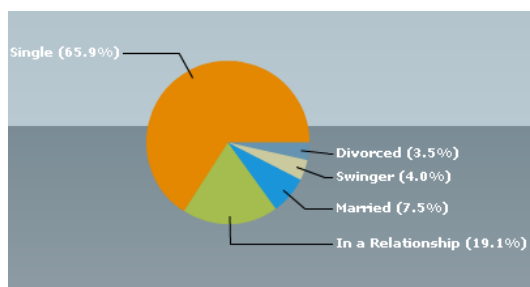
Additionally a tooltip informs the user when holding the mouse over an entry about IMDB-votes and IMDB-rank helping to make the right choice.

To get the information about the selected movie, just press the “Who’s watching this movie?” button. The results will be shown in the Statistic Area.

Statistic Area

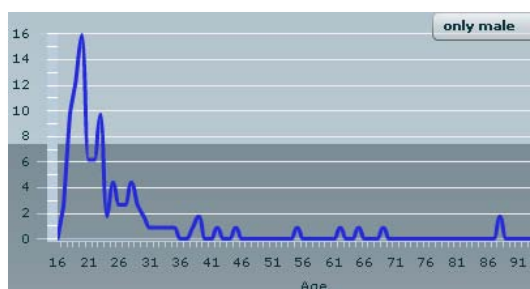
All data to the selected movie will be shown here. The results are ordered thematically and presented in different charts.

There are four chart types used for visualizing the specific data in “Social Movie Map”:



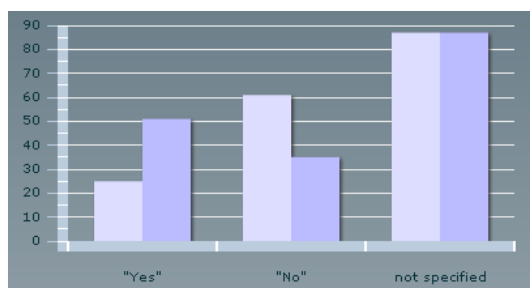
PieChart

The PieChart is a circular chart divided into sectors, illustrating relative magnitudes or percents. In a pie chart, the arc length of each sector is proportional to the quantity it represents. Together, the sectors create a full disk / 100%



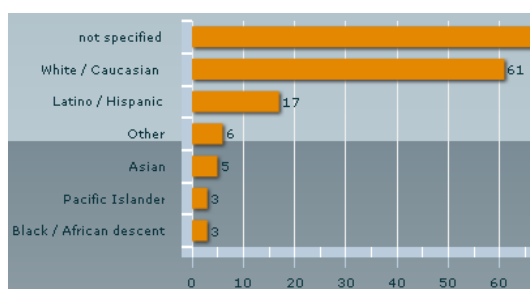
LineChart

The LineChart represents data as a series of points, in Cartesian coordinates, connected by a continuous line.



ColumnChart

The ColumnChart represents data as a series of vertical columns whose height is determined by values in the data.



BarChart

The BarChart represents data as a series of horizontal bars whose length is determined by values in the data.

The Statistic Area contains at all 11 visualizations charts plus 1 additional graph (due to the quantity of information) divided in 4 subpages, which can be accessed by using the Subpage Tab Navigator.

Each chart is about the amount of viewers of the selected movie and deal with one of following attributes you can see below:

Attribute	Chart Type	Subpage
origin	BarChart	"General Statistic"
age	LineChart	"General Statistic"
gender	PieChart	"General Statistic"
family status	PieChart	"Personal Statistic I"
religion	BarChart	"Personal Statistic I"
children	PieChart	"Personal Statistic I"
sexual orientation	PieChart	"Personal Statistic I"
education	PieChart	"Personal Statistic II"
ethnicity	BarChart	"Personal Statistic II"
smoke / drink	ColumnChart	"Personal Statistic II"
bodytype	PieChart	"Personal Statistic II"
...also watched movies	Visualization Graph	"People who like this movie, also watch this"

Table 4: Attributes with chart types and subpage

While PieCharts and even the LineChart show the proportional amount of all values of an attribute (compare with Table 2), BarCharts show only Top15 (origin) or rather Top7 (religion & ethnicity) of the possible values.

All charts – independent of the type – are labeled and provide additional tool-tips, partly with individual content. Tooltips appear when the mouse cursor is moved over a chart element with a value by the user.

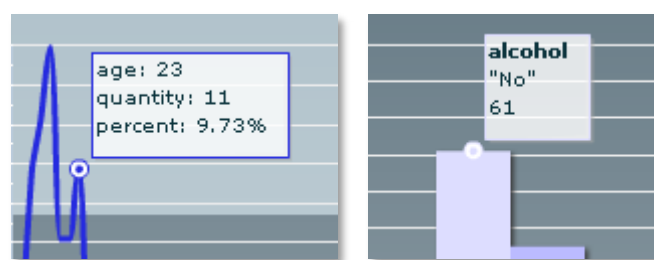


Figure 18: Tooltips provided by the charts

A special chart is the LineChart "age". Here it is possible to select 3 various results (male & female, only male, only female) by choosing the according entry in the drop down menu in the upper right corner of the chart (Figure 19). Depending on the choice, the data line has the color orange (for all, male & female), blue (for male only) or red (for female only). This makes it easy to differentiate between the data provider.

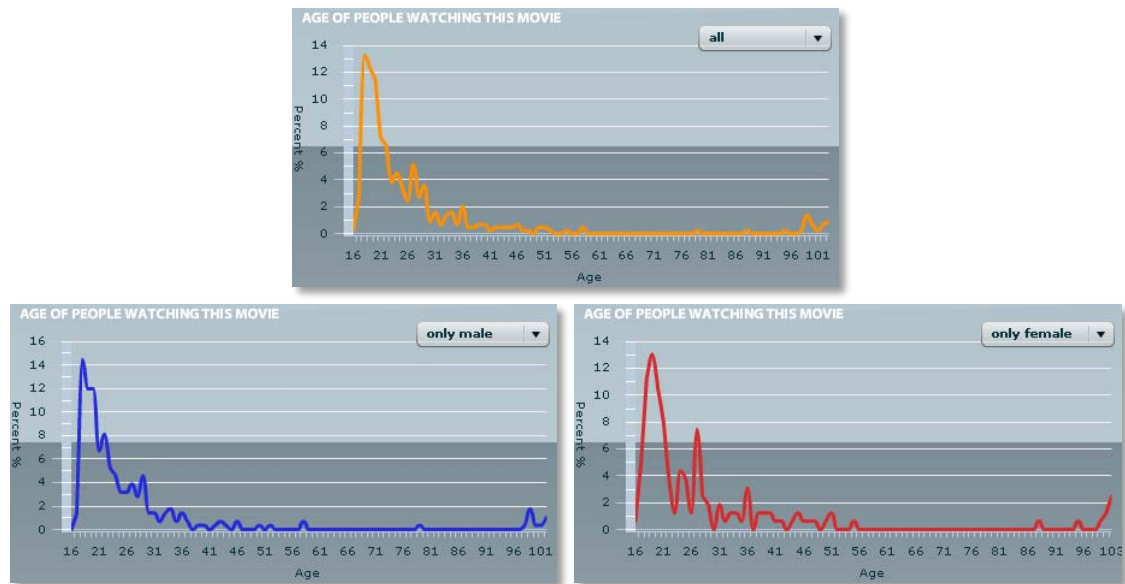


Figure 19: Colored lines (depending on the selected item: all, only male, only female) for the LineChart "age"

On the fourth subpage "people who like this movie also watch this" the user can find a further visualization graph (Figure 20, similar to the graph on the start page) that shows the Top10-Movies of MySpace user, who declared that the in the Movie List (Figure 17) selected movie is one of their favorite movies.

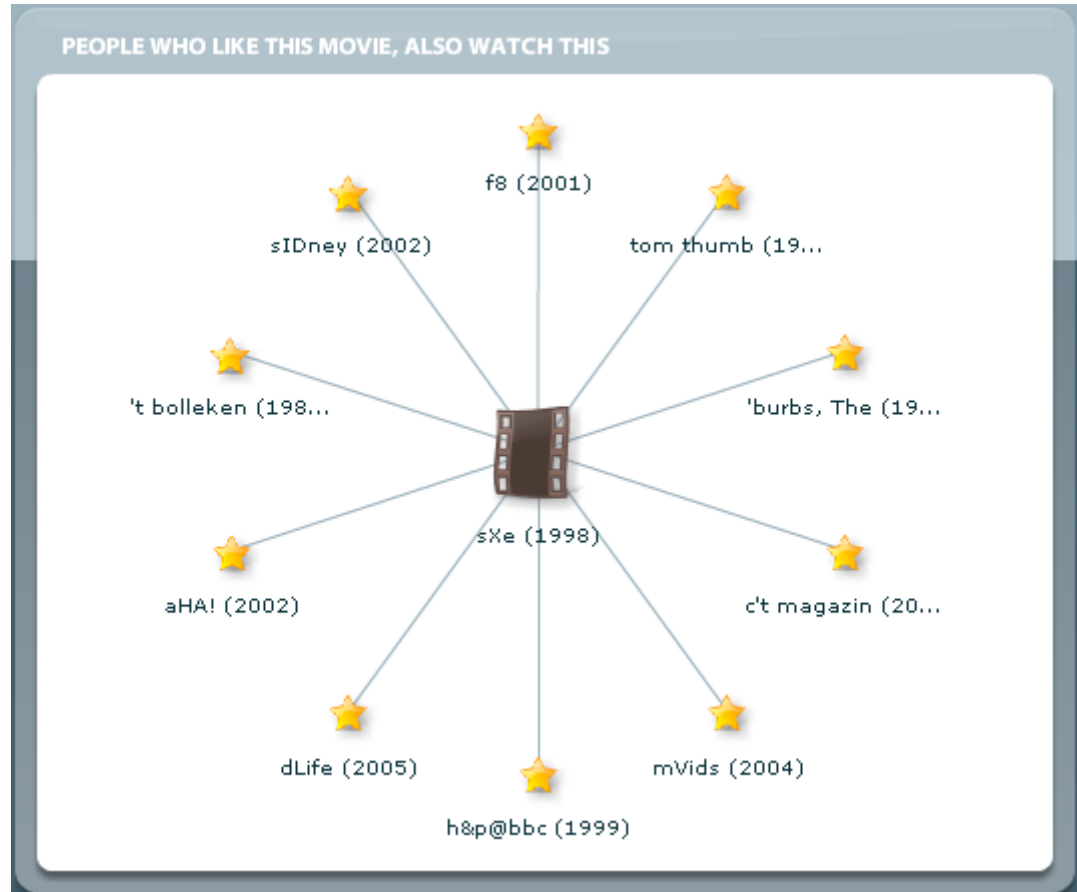


Figure 20: Top10 movies of user who declared the selected movie as one of their favorite

Subpage Tab Navigator

Via the subpage tab navigator (Figure 21) the user reaches the subpages of the statistic area and thus further charts. These are tabs and the charts, which can be reached by this tab:

- “General Statistics” – origin, age & gender
- “Personal Statistic I” – family status, children, religion & sexual orientation
- “Personal Statistic II” – education, ethnicity, smoke / drink & body type
- “people who like this movie also watch this” -



Figure 21: Subpage Tab Navigator

By entering the page the first time the tab “General Statistics” is preselected.

Page 3 – Charts

The third page of this application (see Figure 2) is “Charts”

It shows the user the Top10 MySpace movies for a self defined target group and compares the result with several official Top10 Charts like the IMDB All-Time Worldwide Box-Office Charts or Top10 movies rated by IMDB user.

The Layout is separated in three parts (Figure 22):

- I. a Definition Area, which contains an input form for defining the target
- II. Chart Area, which shows the comparison of the charts
- III. Subpage Tab Navigator for switching between the official charts

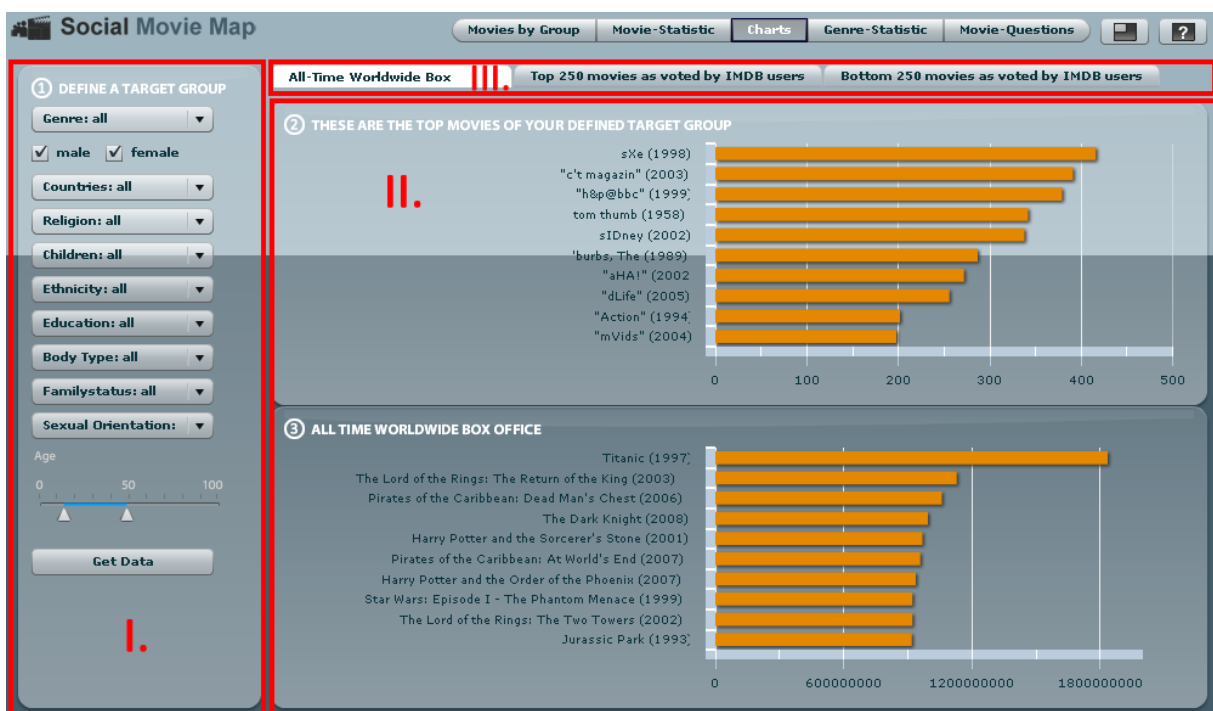


Figure 22: "Charts"-Layout is separated in Definition Area (I.), Chart Area (II.) and Subpage Tab Navigator (III.)

Definition Area

The primary function of the definition area is to define a target group. It is almost identical in layout and function with the Definition Area on the start page (Figure 7), except for the Graph Controls.

For the configuration of the target group it serves multiple drop down menus, checkboxes and an age slider, which can be selected by the user (Figure 23).

By selecting the “Get Data” button, a SQL query with the chosen parameters will be sent to the database. The query result will be shown as Top10 MySpace Movies in the Chart Area. All settings of the target group selection box apply to all subpages.



Figure 23: Target Group Settings

The attributes for target group-selection are identical with the attributes in Table 1. The only additional attribute is “genre”


Form Field	Attributes	Available Values	Field Type
	Genre	<ul style="list-style-type: none"> - all Genre - Action - Adult - Adventure - Animation - Biography - Comedy - Crime - Documentary - Drama - Family - Fantasy - Film-Noir - Game-Show - History - Horror - Music - Musical - Mystery - News - Reality-TV - Romance - Sci-Fi - Short - Sport - Talk-Show - Thriller - War - Western 	ComboBox

Table 5: additional attributes of Target Group Settings

Chart Area

In the Chart area on every subpage two different charts are compared to each other (Figure 24).

The upper chart shows the Top movies of the self defined MySpace user group, while the lower side shows Top Movies of official charts, depending on the subpage. In Table 6 are all different official charts listed:

Subpage	official charts
"All-Time Worldwide Box office"	All-Time Worldwide Box Office Charts
"Top movies as voted by IMDB users"	Top rated Movies by IMDB user (highest rank)
"Bottom movies as voted by IMDB users"	Bottom movies rated by IMDB users (lowest rank)

Table 6: official charts on the subpages

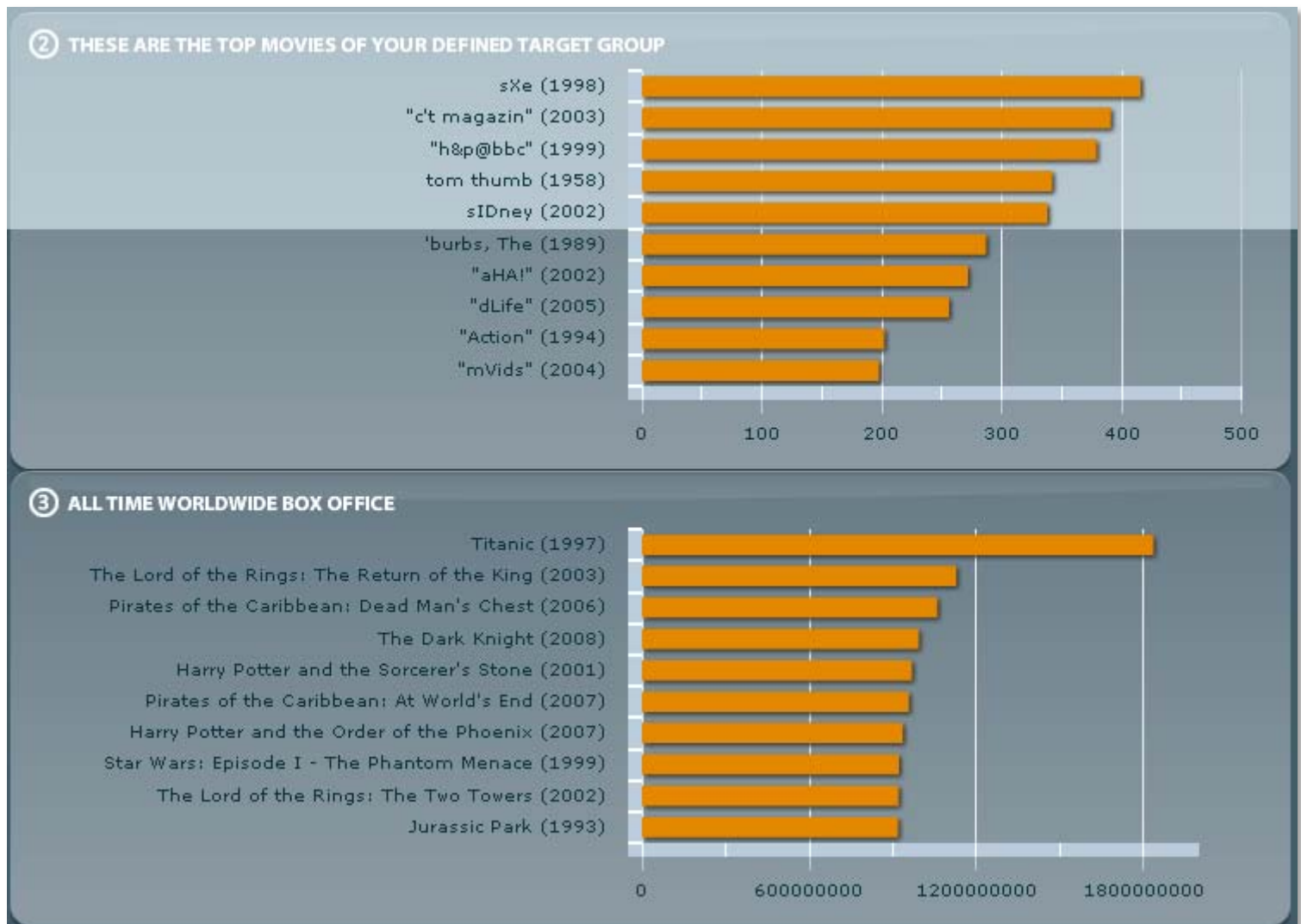


Figure 24: Chart comparison

Subpage Tab Navigator

Via the subpage tab navigator (Figure 25) the user reaches the subpages to the different chart comparisons. These are the tabs and the charts comparisons, which can be reached by each tab:

- “All-Time Worldwide Box office” – compares Top MySpace Charts (of the selected target group) with All-Time Worldwide Box Office Charts
- “Top movies as voted by IMDB users” – compares Top MySpace Charts (of the selected target group) with Top movies rated by IMDB users
- “Bottom movies as voted by IMDB users” – compares Top MySpace Charts (of the selected target group) with Bottom movies rated by IMDB users



Figure 25: Subpage Tab Navigator

By entering the page the first time the tab “All-Time Worldwide Box office” is preselected.

Page 4 – Genre Statistic

“Genre Statistic” is the fourth page of this application (see Figure 2).

The main functionality of this page is to show static charts and analysis, which are related to a single genre. The page’s result layout is very similar to the second page.

Due to the quantity of information the results are split in four subpages, which can be accessed by using the Subpage Tab Navigator

The Layout is separated in three parts (Figure 26):

- I. Genre Selector
- II. Statistic Area for all statistics of the in (I) selected genre
- III. Tab-Navigator to switch between the different result subpages

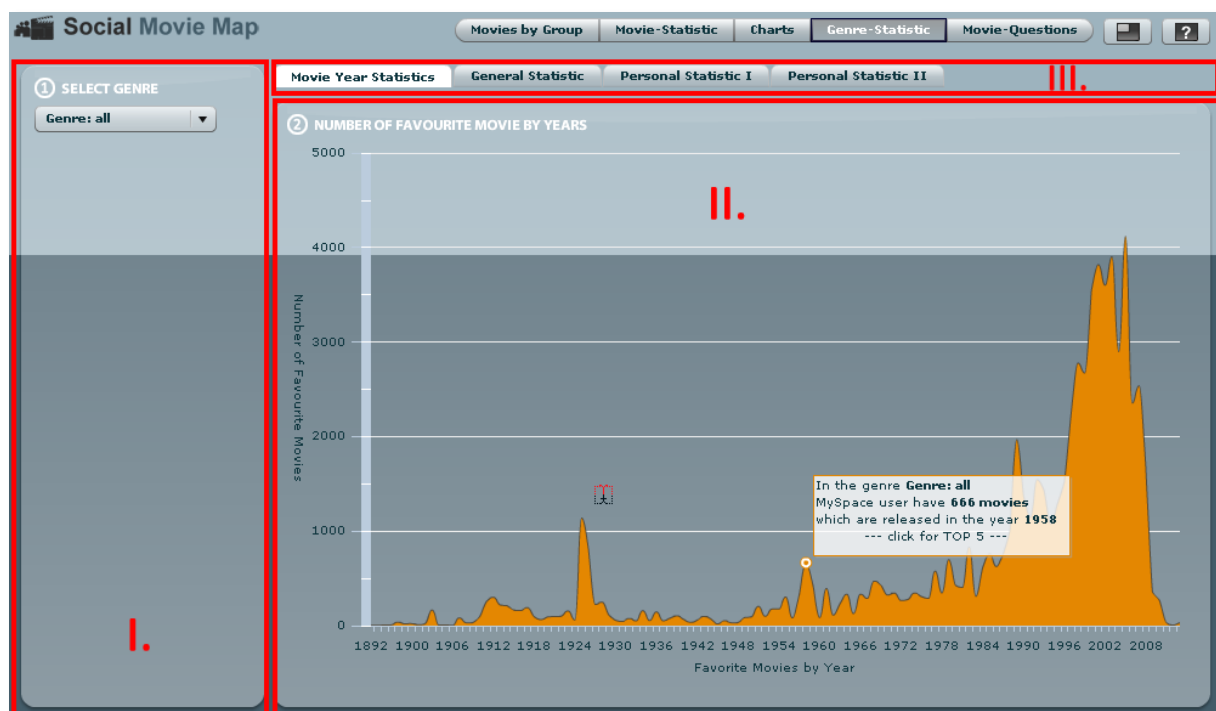


Figure 26: "Genre Statistic"-Layout is separated in Genre Selector (I.), Result Area (II.) and Tab Navigator (III.)

Genre Selector

The Genre Selector is a simple ComboBox, which provides all values listed in Table 5.

This ComboBox provides Auto Confirmation on change, which means that no separate button is necessary to validate the selection.

Statistic Area

The Statistic Area contains at all 12 visualizations charts (due to the quantity of information) divided in 4 subpages, which can be accessed by using the Subpage Tab Navigator.

Each chart is about the amount of viewers of the selected genre and deal with one of following attributes you can see below:

Attribute	Chart Type	Subpage
Movies per year	LineChart	"Movie Year Statistic"
origin	BarChart	"General Statistic"
age	LineChart	"General Statistic"
gender	PieChart	"General Statistic"
family status	PieChart	"Personal Statistic I"
religion	BarChart	"Personal Statistic I"
children	PieChart	"Personal Statistic I"
sexual orientation	PieChart	"Personal Statistic I"
education	PieChart	"Personal Statistic II"
ethnicity	BarChart	"Personal Statistic II"
smoke / drink	ColumnChart	"Personal Statistic II"
bodytype	PieChart	"Personal Statistic II"

Table 7: Attributes with chart types and subpage

The Layout of the Statistic Area is almost identical with the Result Page of the second page "Movie Statistic". It uses the same design, the same types of charts and the same ToolTips (like Figure 18).

For further questions read the appropriate chapter of "Movie Statistics".

Subpage Tab Navigator

Via the subpage tab navigator (Figure 27) the user reaches the subpages of the statistic area and thus further charts. These are tabs and the charts, which can be reached by this tab:

- "Movie Year Statistics" - amount of movies in selected genre per year
- "General Statistics" – origin, age and gender
- "Personal Statistic I" – family status, children, religion and sexual orientation
- "Personal Statistic II" – education, ethnicity, smoke / drink and body type



Figure 27: Subpage Tab Navigator

By entering the page the first time the tab "Movie Year Statistics" is preselected.

Page 5 – Movie Questions

The last page (see Figure 2) is the “Movie Questions”-page.

Here are multiple questions discussed that show profound interrelations of user profiles and their relation to movies.

The Layout is separated in two parts (Figure 28):

- I. The question selector, which provide multiple questions
- II. The Result Area, which shows the answer to the selected question

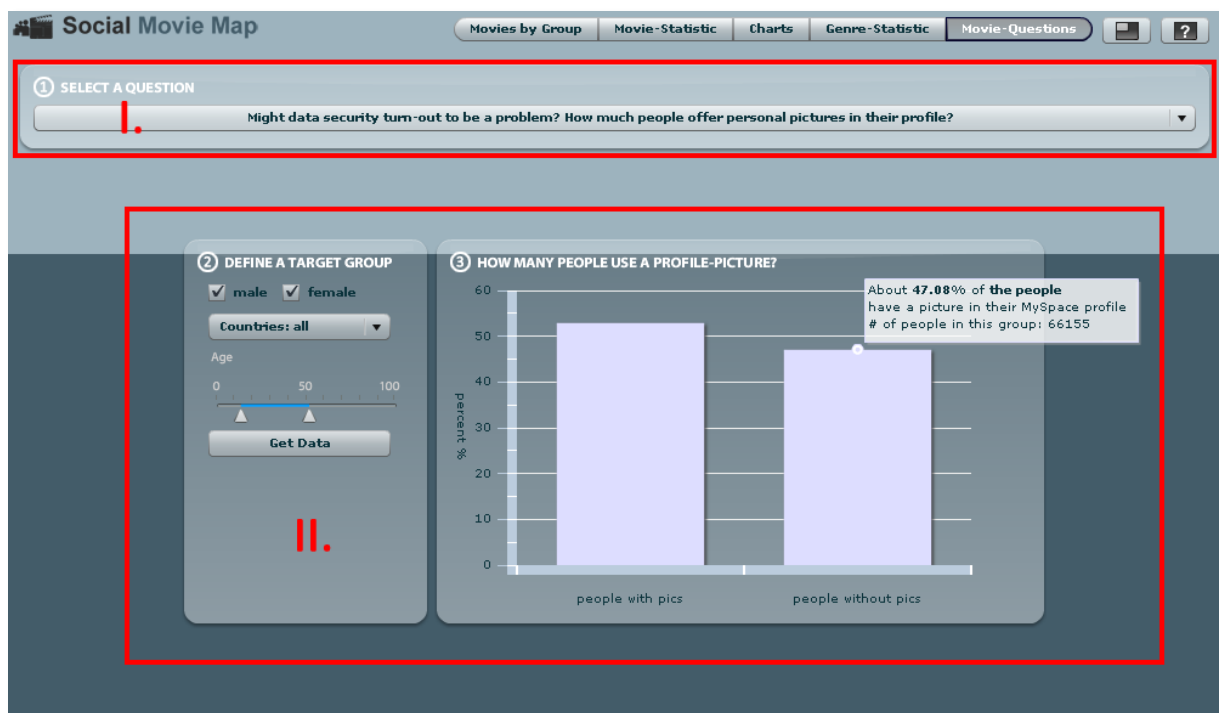


Figure 28: "Movie Questions"-Layout is separated in Question Selector (I.) and Result Area (II.)

Question Selector

The Question Selector (Figure 29) is a simple drop down menu, which contains 7 different questions (Figure 30). The first five questions are related to the movie analysis of the MySpace profiles whereas the sixth question is concerned with the topic of providing personal and private information like pictures in the user profile.

The last question picks up an actual online report on stuff.co.nz, the online news portal of New Zealand's largest media company Fairfax New Zealand. The article reports about a new trend, that teenagers flaunt sex, drugs and violence in their MySpace profiles. Two students supervised by Dr. Dimitri Christakis of Seattle Children's Research Institute analyzed 500 random profiles of 18-year old MySpace user and searched for keywords with sexual or violent content or deals with substance abuse. The result: 41 percent mentioned substance abuse, 24 percent sexual behavior and 14 percent violence.

With already having 6 million user profiles we decided to do a similar research and compared the content of these profiles with a list of 2000 representative keywords.

All results will be shown below the Question Selector in the result area.



Figure 29: Question Selector closed

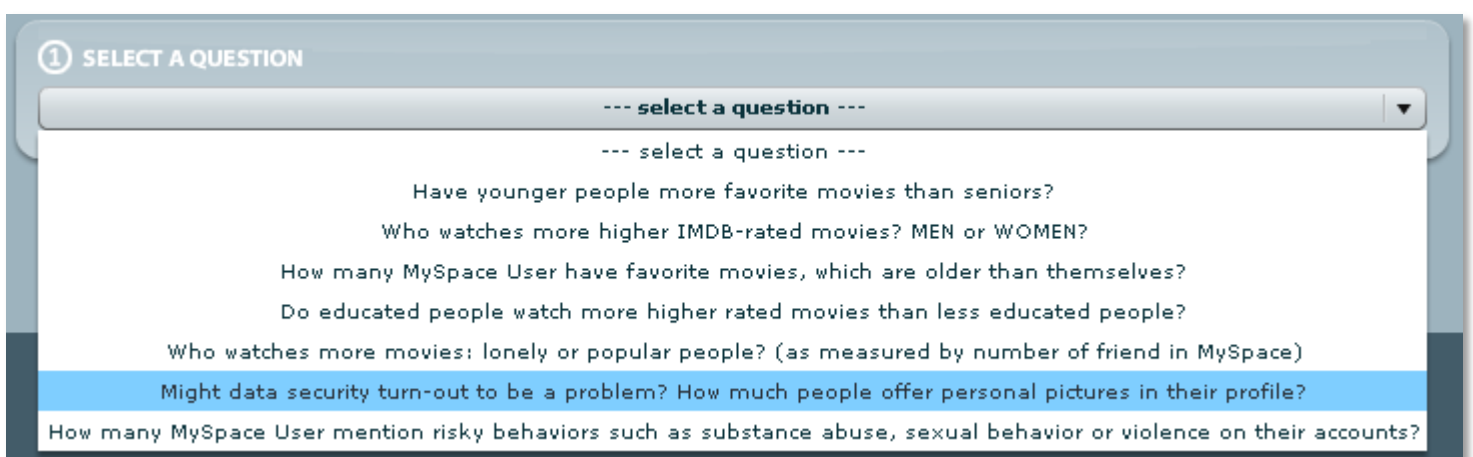


Figure 30: Question Selector opened with all seven questions

Result Area

In this area the results or “answers” to the upper selected questions will be shown as charts.

Most of the questions have a static result. For this reason they have no additional settings (Figure 31) But all charts - irrespective of having special settings or not – have special customized tooltips, which summarize the given chart information (Figure 32)

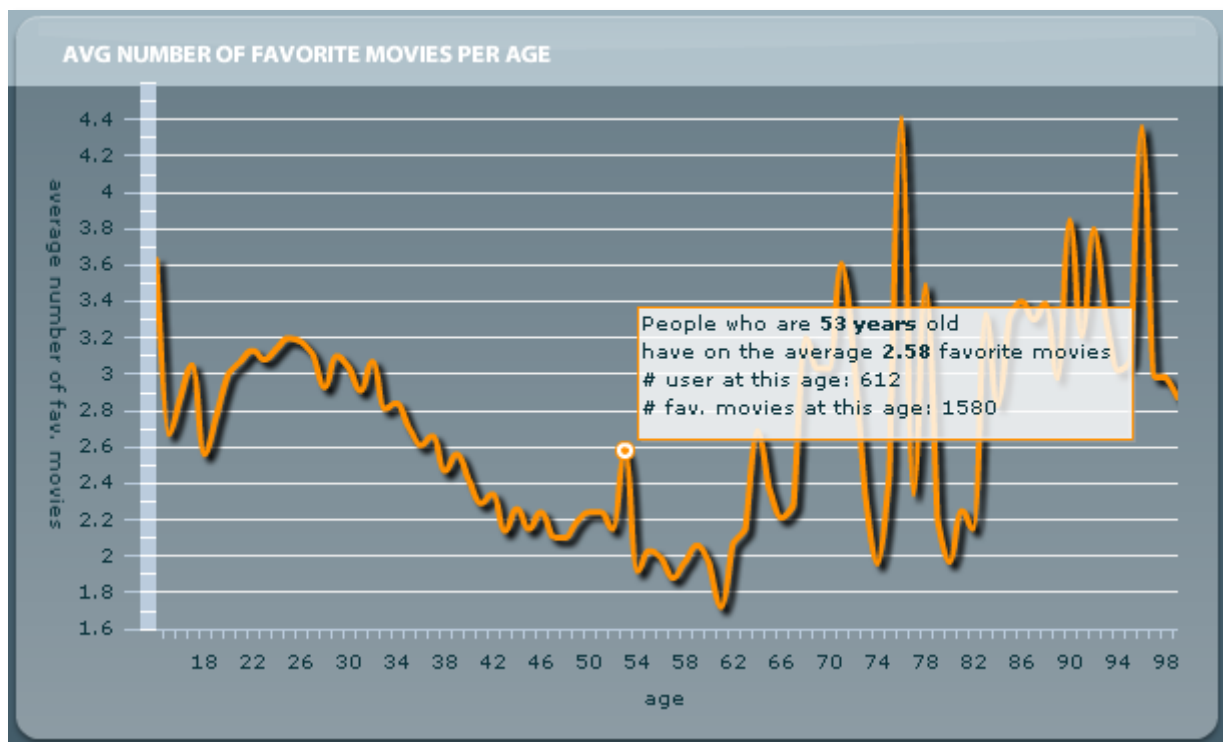


Figure 31: Static LineChart without any setting; customized tooltip



Figure 32: further customized tooltip