

VIS REPORT

Television Fan Theory Visualisation

Aurelia Drummer, Amber Goldberg & Bee Sharwood

Contents

Introduction	2
Related Work	2
Visual Queries	5
Prototypes.....	5
Description of Design	6
Form.....	9
Discussion.....	10
Conclusion and Future Work	10
Work Division	11

Introduction

Television (TV) is a popular form of entertainment for many individuals and it therefore is often a common topic for discussion. Many TV series have complicated plot lines which involve different characters and span over many episodes. These plots can develop throughout a season or even many seasons of a TV series and fans become intrigued in what will happen in the different storylines. While the TV shows are airing, fans often attempt to guess the outcomes, of different plots, based on evidence given in episodes for those particular storylines. This is possible as TV writers frequently give hints throughout the season of how a plot might end. The more central to a series a given plot is, the more theories fans come up with. Fans also enjoy comparing theories and discussing the likelihood that their theories are correct as well as sharing what evidence they think is relevant to different plot lines.

Fans post theories and the evidence for those theories on many different platforms and it can therefore be quite difficult to keep track of all the information. Our visualisation intends to display all possible theories, for different storylines, along with the relevant evidence for the theories. Fans of a series can use the visualisation to view different theories for a particular series, view specific theories for a certain plotline of a series and view evidence these theories as well as which episodes the evidence comes from. Ideally, fans would submit theories and the visualisation would be created automatically.

Related Work

Before designing any prototypes we looked at infographics of other TV shows to see what else is out there. We found a few designs that we really liked and that gave us inspiration for our designs, as well as some visualisations that were not as appealing. This helped us decide what we wanted and didn't want to include into our visualisation.

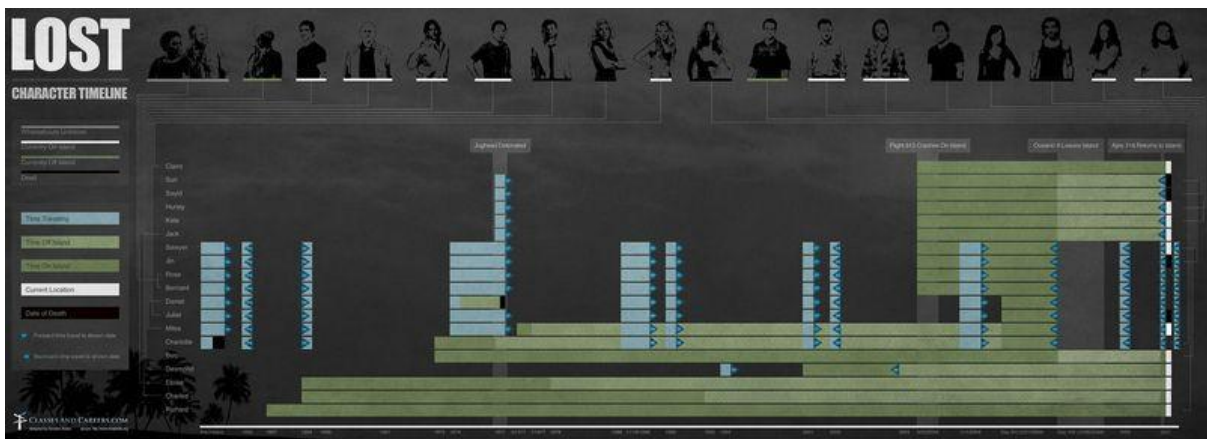


Figure 1: Lost Character Timeline

A desirable feature from the image below is that if one clicks on a colour in the key only the lines that represent that relationship will show up, in this instance only the yellow connections are displayed

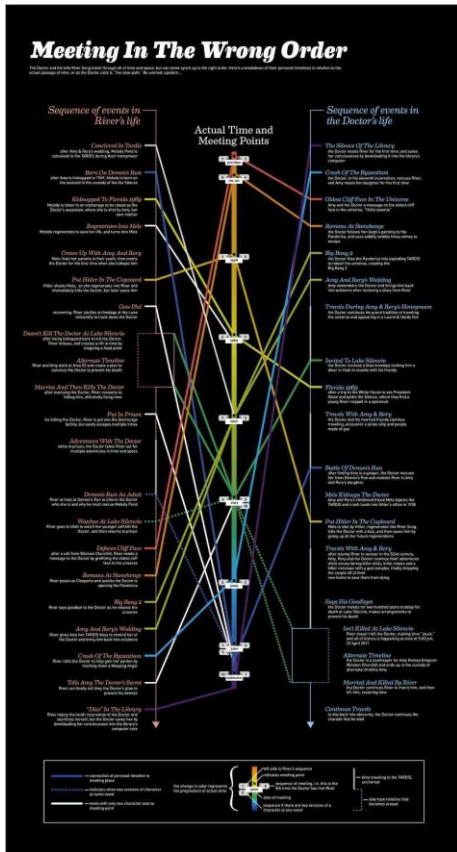


Figure 2: Meeting in the Wrong Order

This visualisation shows information about the meetings of two characters in the show Doctor Who. We liked the use of colour in this image as well as the cleanness of the lines which indicate links between points in the characters' timelines.

DOCTOR WHO SERIES 1-6 TIMELINE

made by Nathaneernd

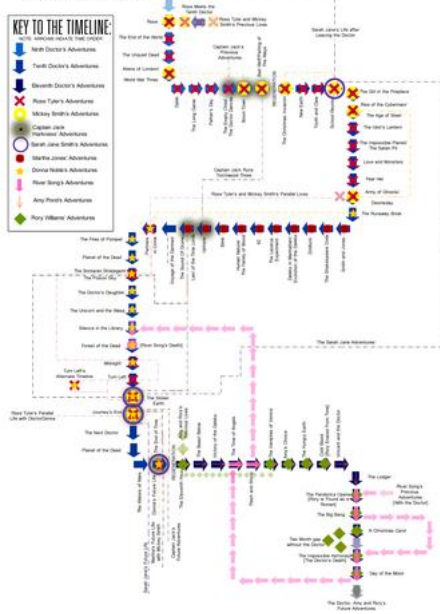


Figure 3: Doctor Who Series 1-6 Timeline

We found this visualisation particularly cluttered and unappealing. It shows events in Doctor Who during seasons 1 to 6. We did like the use of symbols, although there are so many symbols it is often hard to distinguish between them. Although this visualisation is not related to TV shows we found it very visually appealing. We liked that the lines were all the same thickness and that you gained information by looking at the number of the lines grouped together around the different satellites. We used this concept in our final design.

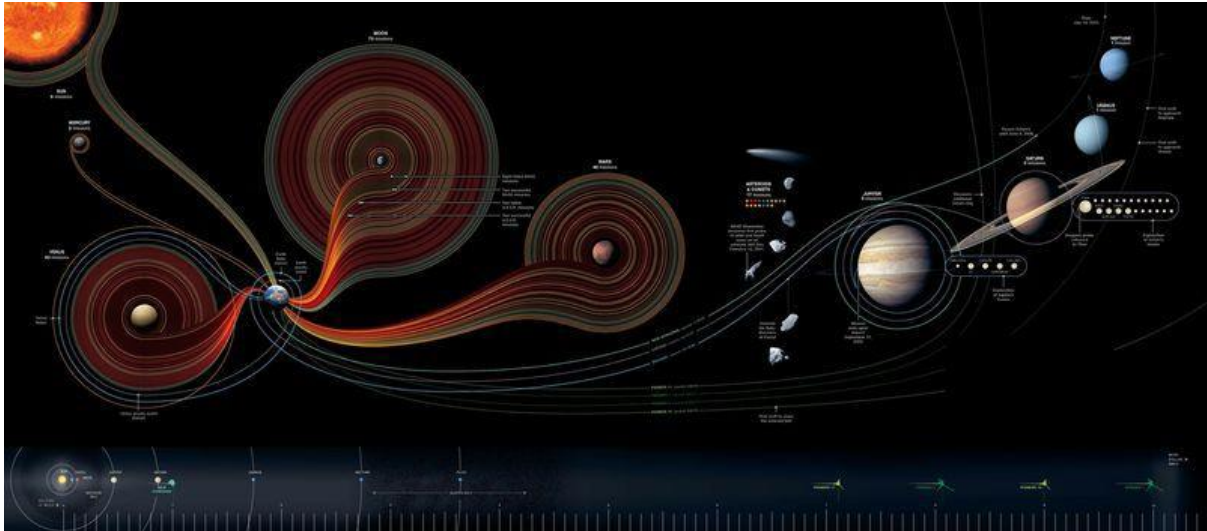


Figure 4: 50 Years Of Space Exploration

Although this visualisation is not related to TV shows we found it very visually appealing. We liked that the lines were all the same thickness and that you gained information by looking at the number of the lines grouped together around the different satellites. We used this concept in our final design.

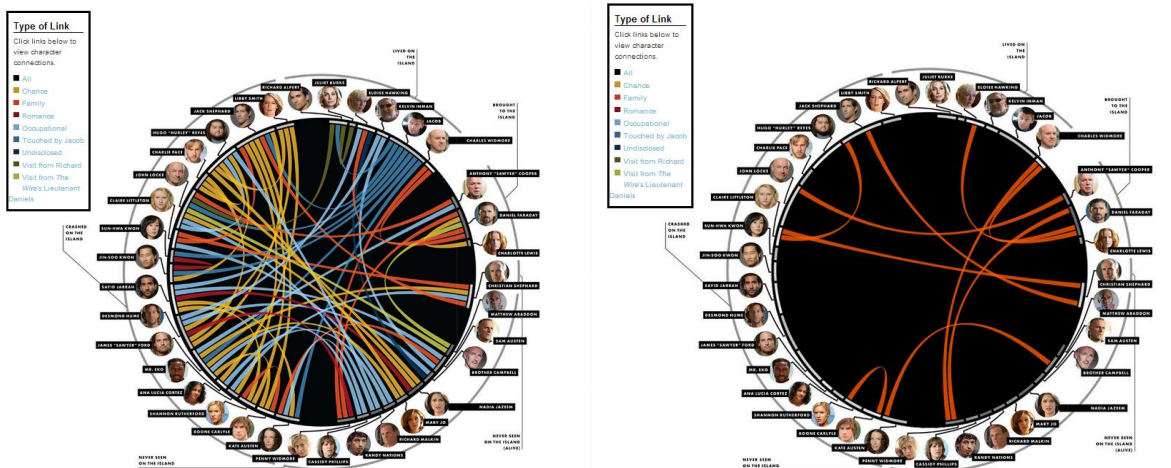


Figure 5: Lost Web Of Intrigue

This visualisation shows connections between characters in the TV show Lost. We liked the different colours that were used to distinguish the different types of connections. The interactivity of the visualisation also inspired us to allow users to highlight the different lines in our final visualisation.

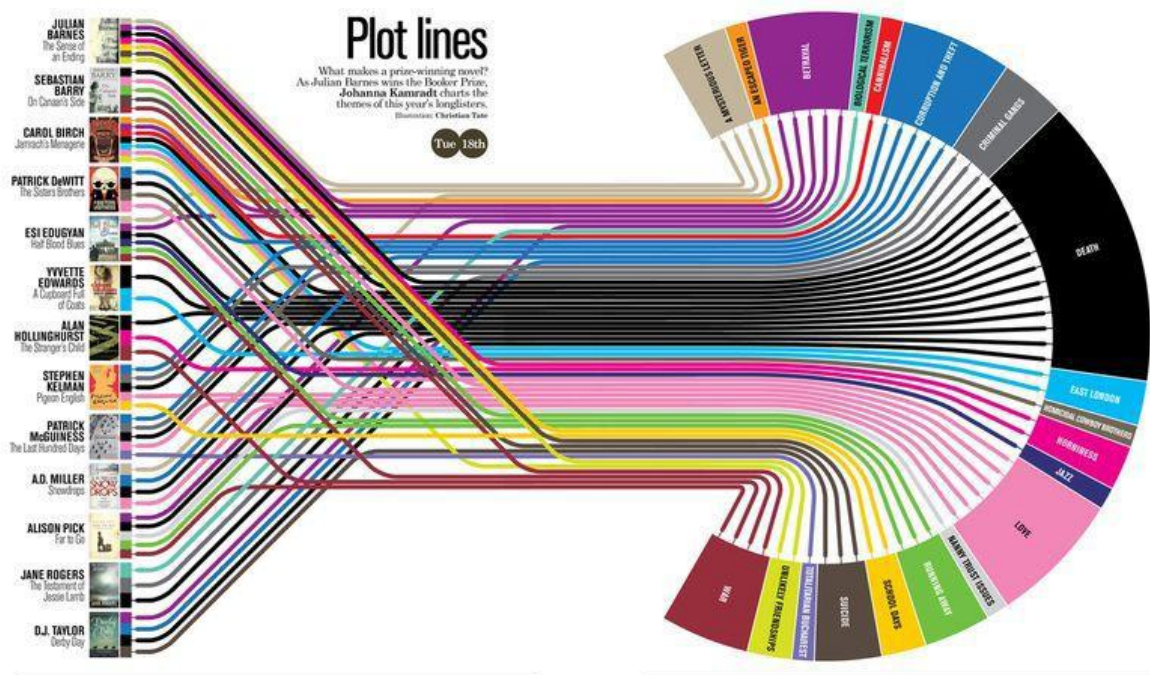


Figure 6: Book Plot Lines

This was possibly the biggest influence on our final design. We really liked the use of colour to group concepts. We especially enjoyed that colour palette is attractive and each colour is also relevant to the concept it represents (e.g. “Escaped Tiger” is orange). We also found the way that the lines cross over each other to be visually appealing.

Visual Queries

Some of the queries a fan could answer using this visualisation:

- What plot lines are being discussed in this TV series?
- Which episodes are most relevant to this plotline?
- Which theory has the most evidence?
- Which theory is the most popular?
- What evidence does a particular theory have?
- Which episodes does the evidence come from?
- Which episodes support which theories?
- What are the different theories in a TV series?

Prototypes

Our initial prototypes looked at how to display different theories in relation to the episodes which provide evidence for these theories. We tried to find ways to show that the evidence comes from a few different episodes and that theories can develop over the course of a season (fig. 7). We also looked at possible ways in which one theory can branch off into a few theories and how we could incorporate images into the theories (fig. 7). We also tried to find ways of displaying different

theories from a TV series that weren't related (fig. 8 & 9). Here colour was important as well as highlighting which episodes were relevant to the different theories.

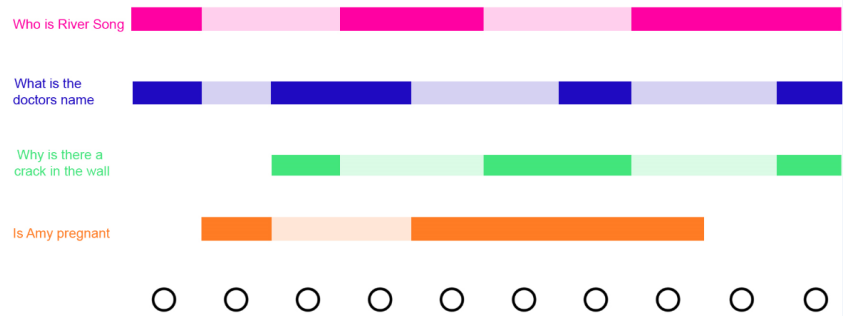
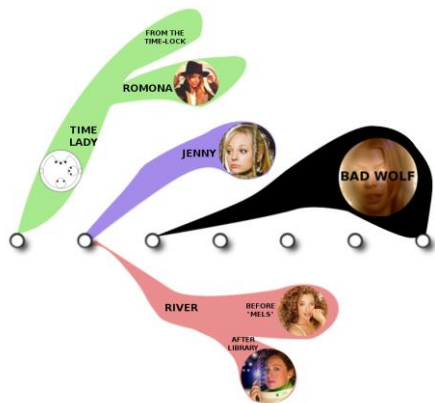


Figure 7: Prototype 1

This is a prototype of Clara Theories

Figure 8: Prototype 2

This figure is a prototype of multiple Doctor Who theories

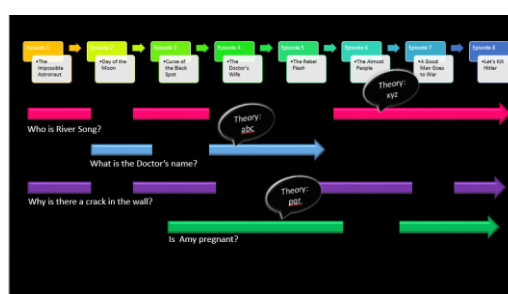
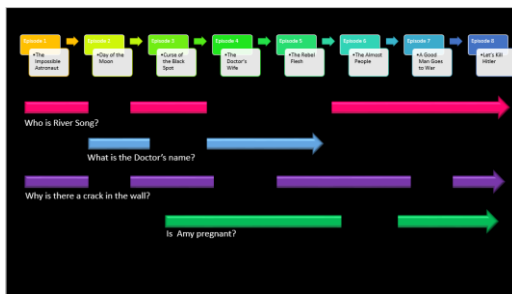


Figure 9: Prototype 3

This is a prototype of many Doctor Who theories

Description of Design

Our design allows the viewer to clearly view different TV shows as well as the different theories. We made use of colour and texture to make it easier for the user to group the information conceptually.

In the first view, an equal view of television shows is shown. They are arranged in a circle, alphabetically clockwise from the top (fig. 10a). This view does not show any information about the number of theories in each show or their popularity. When the user is performing a query they will know which show interests them and any other information is irrelevant.

Clicking on any one of these shows will display the different questions or plot lines that have been theorised about (fig. 10b & 10d). The information about each plot line is hidden until the user selects the plot line. This is to reduce the chance of "spoilers" for users that are not up to date with the show. Selecting a question or plotline will highlight that particular plotline as well as give the title of that plot line and a short summary (fig. 10c). The user can then click through to the visualisation for that plot line. The user may also click on the show to see a visualisation of a summary visualisation that shows all the relevant plots and the major episodes and evidence for these plots.



Figure 10a



Figure 10b

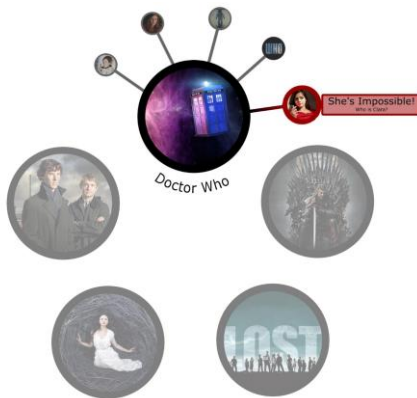


Figure 10c



Figure 10d

Figure 10: Visualisation of TV show options

The three figures above display the transition from viewing all the TV series (10a), to selecting a show (10b) and finally selecting a theory from a show (10c). In Figure 10d the viewer is selecting a different TV show and viewing all the theories for that show.

In the theory visualisations, lines represent pieces of evidence which link the source (an episode) to a target (the theory) (fig. 11a). These are linked through colour and texture. Theories are listed on the right in descending order of popularity as seen in figure 11a. The user can easily query how substantiated a theory is by looking the number of evidence lines that point to it as well as the thickness of the horizontal theory line (fig. 11a). When visualising just one question with many possible theories colour differentiates the different theories, and texture is used to differentiate different versions of a theory (fig.11b). Colour is also used to represent different character theories in visualisations of many plots of a TV series. In this instance different colours will be used for different characters and then various shades of the same colour will be used to represent different theories for a particular character (fig. 11b). A key of the characters' names and the colours that represent them is also part of the visualisation, in order to help the viewer.

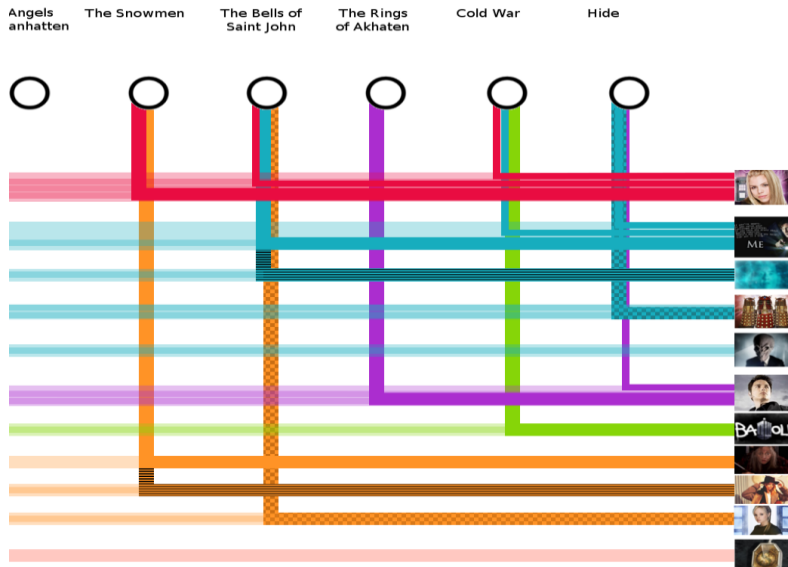


Figure 11a: Visualisation of Clara theories from Doctor Who

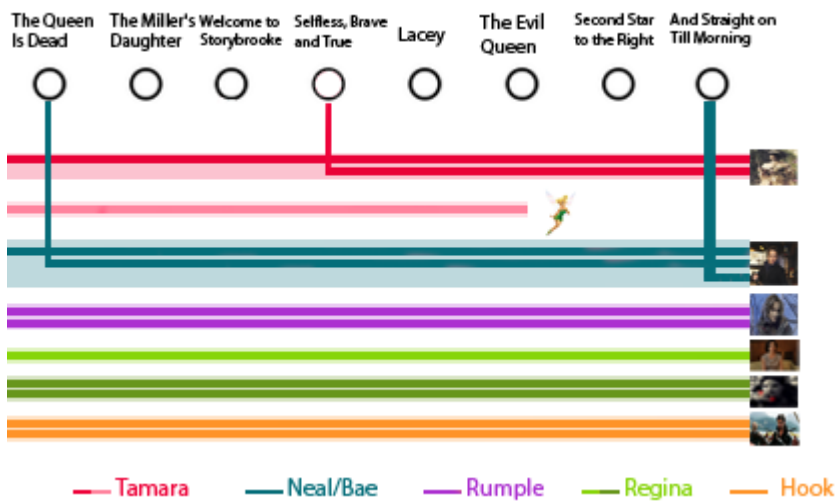
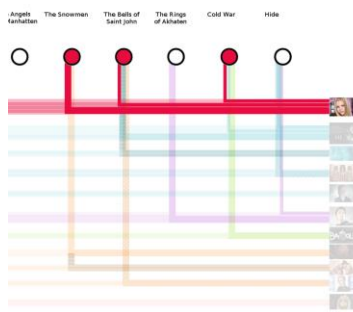


Figure 11b: Visualisation of Once Upon A Time theories

Clicking on a theory image or an episode will highlight the relevant evidence (and fade out everything else) and reveal a summary of the theory or episode (fig. 12a). Clicking on an evidence line will highlight that line and will reveal the details of the piece of evidence (fig. 12b). By fading out the other theories, we allow the viewer to still be able to see all the theories, however they do not interfere with the query being viewed. The information about the evidence/theory is displayed in a box on the right of the list of theories, and is the same colour as the theory being queried as well as containing the relevant image of the theory (fig. 12). The only time this box will be more than one colour is if a character with more than one theory is being queried (fig. 12d). Here the box will be the colour of all the theories, and when one of those theories is being viewed will the box will be that specific colour.

in Oswald?



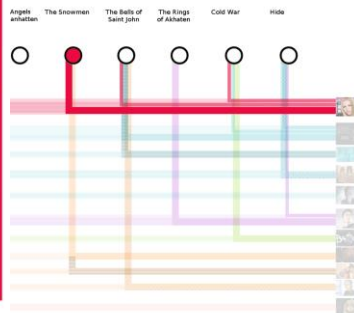

ROSE TYLER
Clara is Rose or is somehow related to Rose

The concept of a rose has been scattered through all of Clara's appearances.

Clara is either Rose herself or a message that Rose is sending to the Doctor from the Alternate Universe, warning him of something.

The TARDIS doesn't like her because she is from the wrong universe.

in Oswald?



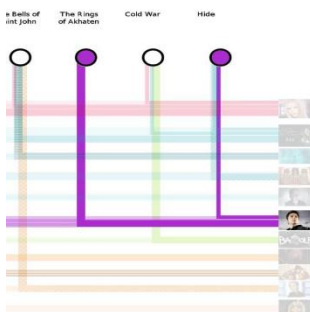

ROSE TYLER
Evidence from *The Snowmen (Christmas Special)*

Clara works at the Rose & Crown and has a rose carved into her gravestone.

Figure 12a

Figure 12b

valid?




JACK'S DAUGHTER
Clara is the daughter of Jack Harkness

Much like Jack, Clara does not stay dead when she dies.

The Face of Boe (Jack) was once said to be pregnant. Clara could be his daughter.

The TARDIS like neither Clara nor Jack.




Regina/Evil Queen
Is Regina Rumpel's Daughter

Figure 12c

Figure 12d

Figure 12: Viewing specific theories or evidence

1. Select or Create a Theory

Select existing theory
 Select Other to enter a new theory.

Other
 Enter a brief summary of the new theory.

Description (optional)
 Enter a longer explanation/description of the theory. The best quality description will be used in the visualisation.

Image upload
 No file chosen Select an image to be displayed with this theory.

Form

In order to make the visualisation more interactive we have designed a form for fans to submit information about theories. They can either submit more evidence to an existing theory or they can add a new theory with new evidence. This new information will then be added to the visualisation.

Figure 13: Part of the form used to input information



Figure 14a

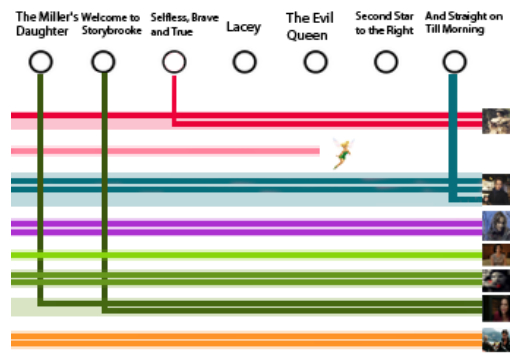


Figure 14b

Figure 14: Visualisations of adding new evidence and a new theory

The two images above show how new evidence can be added to an existing theory (13a – third purple line) or how a new theory can be added to the visualisation (13b – third green theory)

Discussion

We think that our design clearly visualised what we wanted to display. We found a unique way of visualising the data from the theories and TV shows. Although we achieved what we set out to do, there are a few shortcomings.

Strengths:

- Widely applicable
- Able to logically connect ideas by using different shades of the same colour, or different textures
- Right angles make the design clean and limit “cluttering”
- Scalable number of episodes displayed

Weaknesses:

- Currently requires manual compilation of data
- There is a limit on the number of theories that can be displayed (limited by colour and the number of evidence lines that can drop down from an episode)

Conclusion and Future Work

Overall, our visualisation received a lot of positive feedback during our presentations and we were very happy with the end result. It is possible to adapt the design for many other areas, particularly areas where there are many hypotheses, such as scientific theories. It is applicable for showing different concepts and how substantiated they are. One example where this design could be used is in the comparison of theories in cancer research, where papers put forward evidence for certain theories and it is important to see which theories are the most researched or substantiated.

Future work would include dynamically drawing the visualisation based on submitted evidence. Additionally, we could include a setup phase that would remove our TV-show specific approach and allow more general visualisations to be created. This would allow a user to specify that they wanted the top circles to represent “papers” or “episodes”, and to change the terminology used in the form. These additions would then provide a visualisation generator, which wouldn’t require any knowledge of programming or image tools.

Work Division

Initial brainstorming was a group effort, and all design choices were critiqued by all group members. Aurelia did a lot of the initial image creation, due to her greater experience with GIMP. Particularly, she designed all of the “Clara Theories” images. She also built the form.

Bee created the higher level view of all the TV shows and built the interactive version.

Amber made the “Once Upon A Time” images.