

3. Screenplay Analytics with ScriptFAQ

ScriptFAQ is an online application that functions as a prototype for a screenplay analytics tool. ScriptFAQ is focused on 'asking questions' of your script so there are specific sets of frequently asked questions at 5 levels:

1. Script
2. Scene
3. Role
4. Location
5. Words

ScriptFAQ is written in PHP/Javascript and uses the Open Source MySQL database to store the screenplay data and metadata. There are 5 'public' scripts on the site, that are versions of some well-known released movies and there is a demo login that provides access to a version of the Dan O'Bannon script for Ridley Scott's *Alien* (1979). ScriptFAQ is not focused on screenplay writing but on screenplay analytics.

Scripts must be imported into the application in Final Draft .fdx format (an XML-based file format) and the content is then 'shredded' into the various database tables. ScriptFAQ allows users to add a range of additional metadata to their script in order to drive some of the analyses. The basic paradigm of ScriptFAQ is:

- import a script
- tidy up the data and metadata (if required - few imports are perfect)
- add new metadata
- run the analyses

The analyses that ScriptFAQ generates are mostly in the form of tables and charts (bar, line, pie). Many of the analyses can be generated without any additional metadata but some will only work if the appropriate metadata is added by the 'analyst'. Most of the screenshot examples discussed in the functional 'walk-through' below use the demo login and the *Alien* demo script as the data source.

3.1 ScriptFAQ Script Home

Once you have selected a script to analyze, you'll see the script home page as shown in figure 3.1 below. Here you can see the basic 'entity' stats for the script, the sharing link and the comments panel, where others can comment on this script (if it is set as 'shared' or 'public'). A sidebar (see figure 3.2) lists the various FAQ pages you can access for the script.

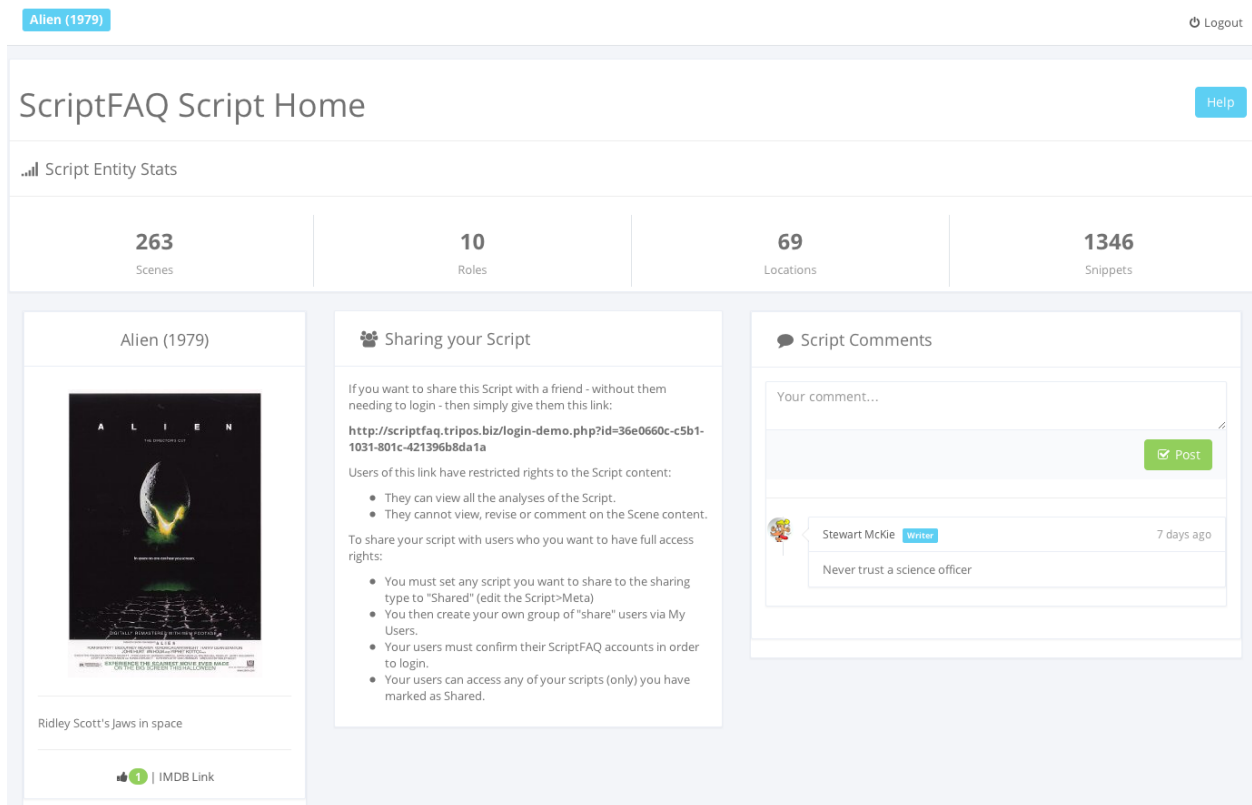


Figure 3.1 ScriptFAQ Script Home Page

3.2 ScriptFAQ Script FAQ List

The Script FAQ lists a series of questions to ask about the script level content, you click the button (far right) to view the analysis 'answer'.

Alien (1979) Logout

Script FAQs

Ask questions of your Script-level content.

#	Type	Question	About	
1	Pie	Do the script scenes take place mostly internally or externally?	?	?
2	Pie	Do the script scenes take place mostly during the day or at night?	?	?
3	Pie	What is the gender balance of the script dialog?	?	?
4	Line	What is the thruline for the script action and dialog?	?	?
5	Table	Can I view all the Action in my Script?	?	?
6	Table	Can I view all the Dialog in my Script?	?	?
7	Pie	What proportion of my script is expensive EXT & NIGHT scenes?	?	?
8	Pie	What level of Parental Guidance (PG) content is there in this script?	?	?

This example shows the % of potentially expensive EXT and NIGHT scenes in the script:

Alien (1979) Logout

Script FAQ | % of EXT & NIGHT Scenes

Ask questions of the **Alien (1979)** script.

What proportion of my script is expensive EXT & NIGHT scenes?

Suggested by JT Velikovsky: EXT & NIGHT scenes are often more expensive - due to overtime cast and crew rates - whereas INT & DAY scenes are likely to be less expensive to shoot (all this depends on the scene content of course).

% of EXT & NIGHT Scenes

Category	Percentage
INT & DAY/NIGHT Scenes	87.85
EXT & NIGHT Scenes	12.15

3.3 ScriptFAQ Scene FAQ

This example shows an analysis of the top 10 scenes in terms of their dialog content (i.e. dialog heavy scenes).

Alien (1979)

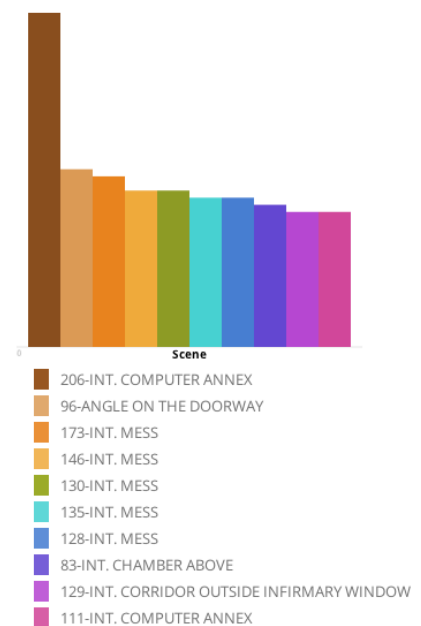
Scene FAQ | Top 10 Scenes by Dialog

Ask questions of your Script-level content.

What are the top 10 scenes for dialog?

This counts the number of dialog snippets in the scenes to propose the scenes with the most dialog in them.

Top 10 Scenes by Dialog



3.4 ScriptFAQ Role FAQ

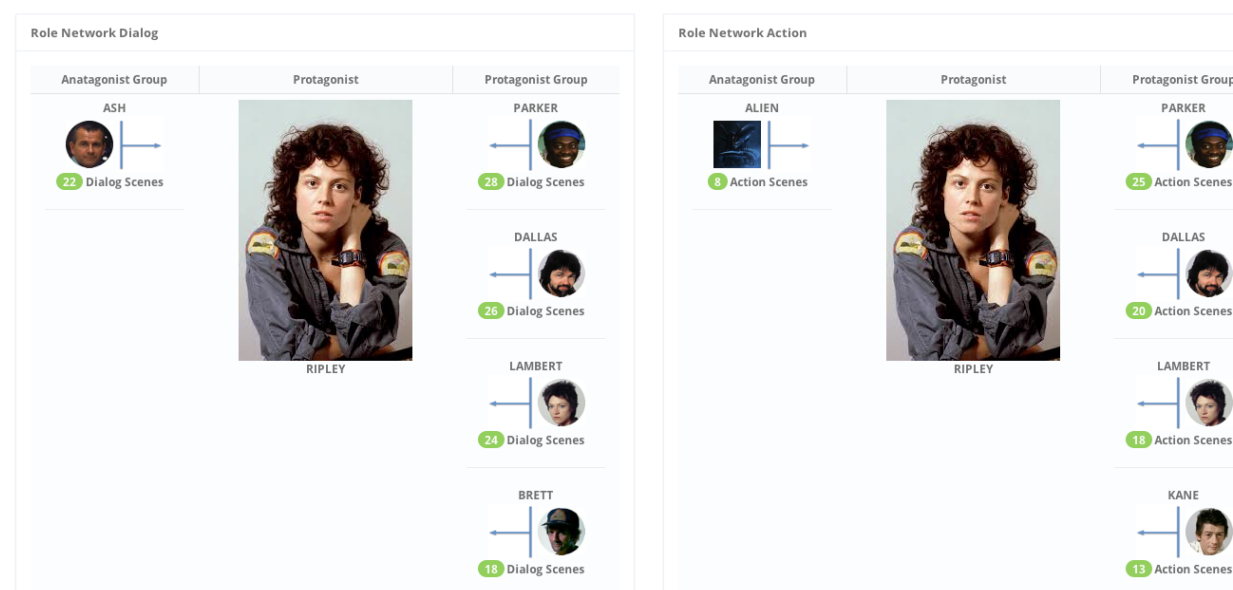
This example shows a 'thru-line' of roles in the script and their entry and exit scenes.



The next example shows the relationship of other characters to the Protagonist (RIPLEY) in terms of dialog and action snippets (this depends on additional metadata being added to the script).

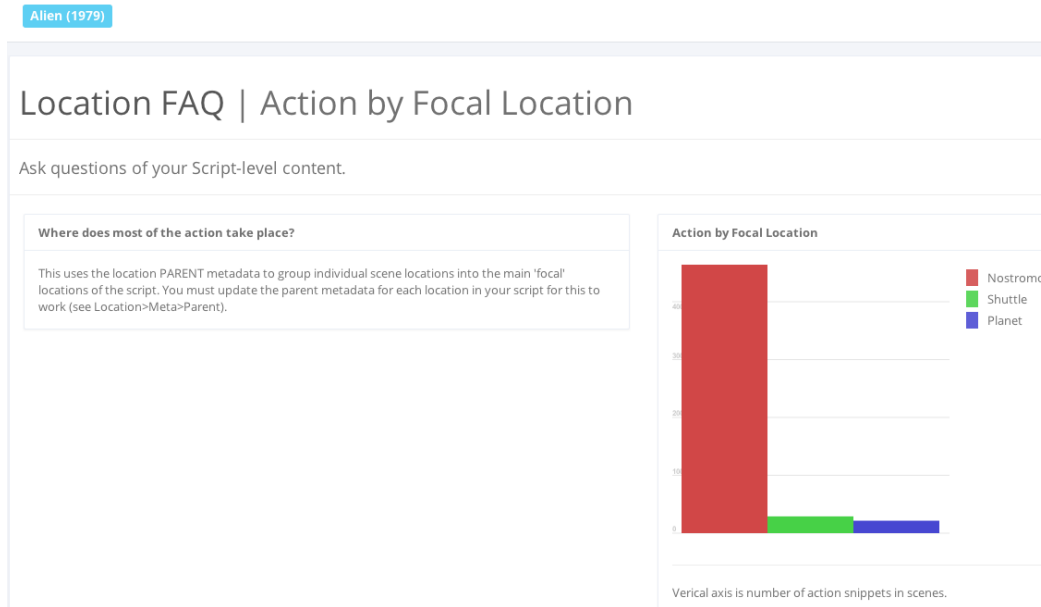
Role FAQ | Role Network - Dialog & Action

Ask questions of your Script-level content.



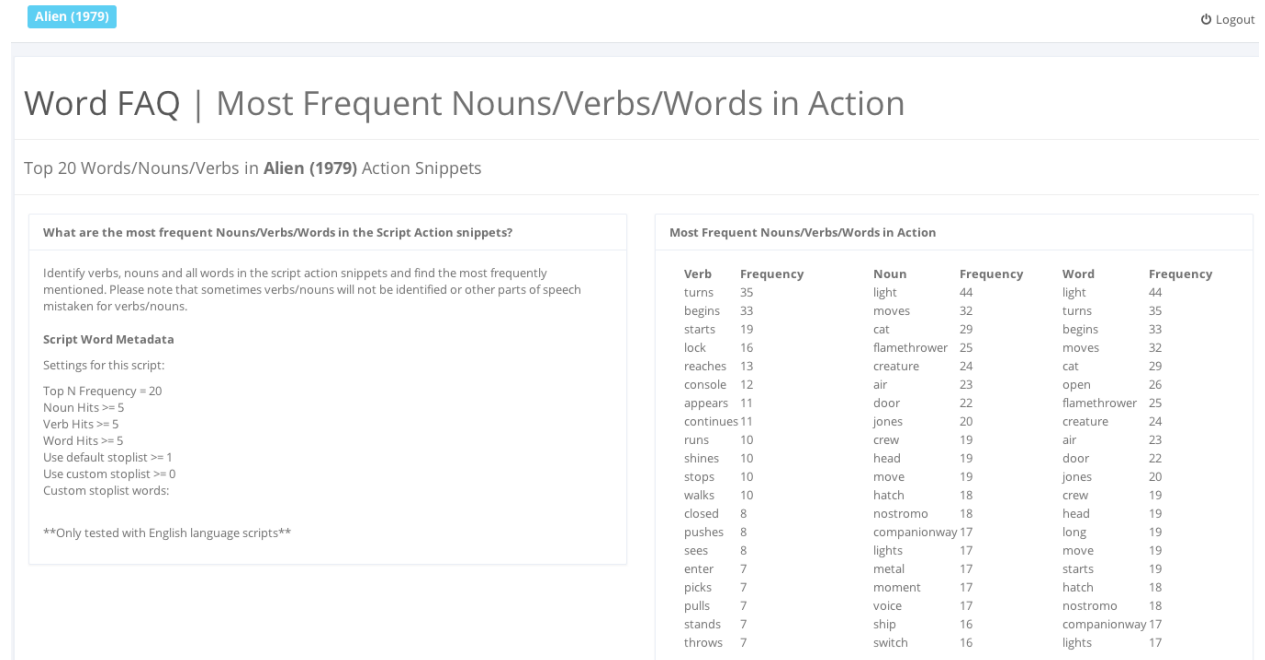
3.5 ScriptFAQ Location FAQ

This example shows the balance of scenes across the main location 'parents' in the script.



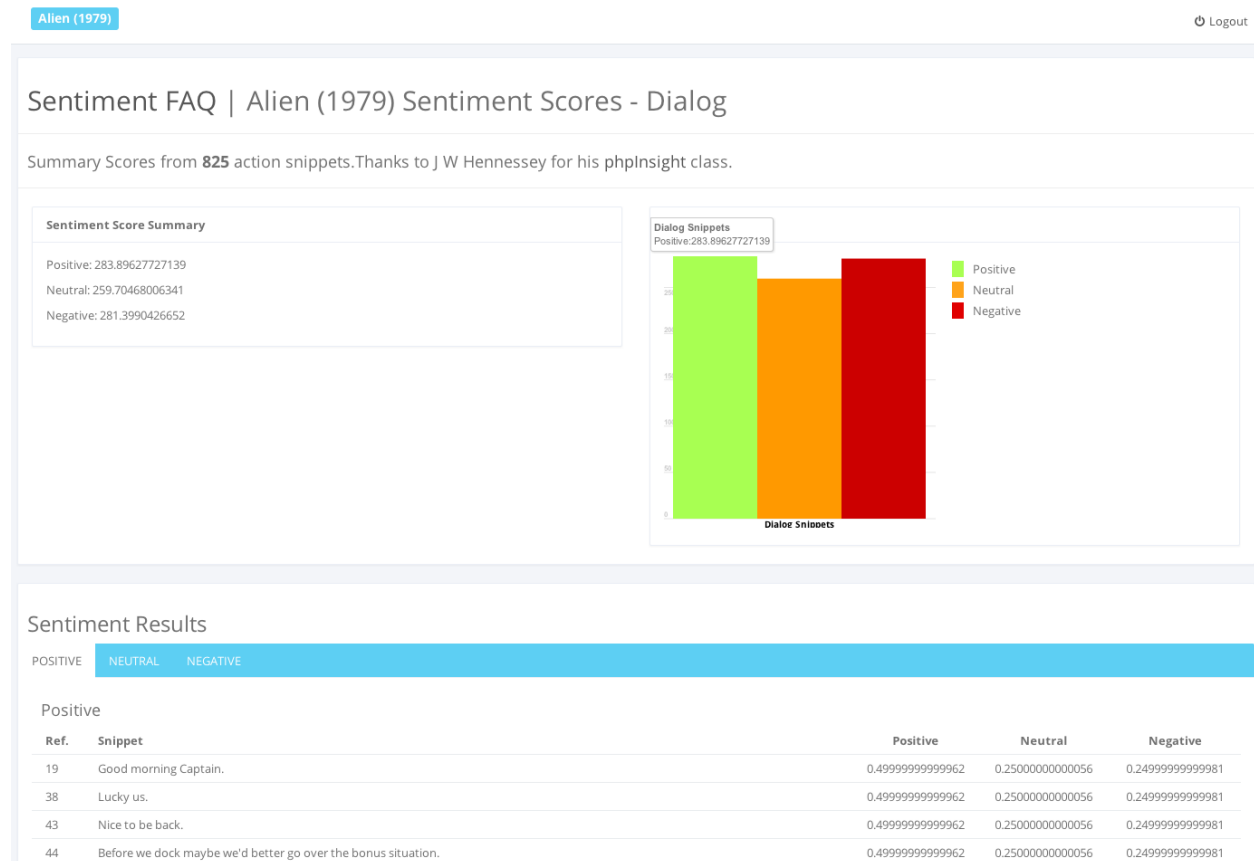
3.6 ScriptFAQ Words FAQ

This example shows the most frequent words from action snippets only.



3.7 Sentiment Analysis

This example shows the application of basic sentiment analysis to the dialog snippets only.



3.8 Analysis Using Other 'Big Data' Tools

I have uploaded the same *Alien* screenplay content to a handful of 'big data' analysis tools to see what they can do, including:

- Alchemy
- BigML
- DataHero
- DataSeed
- Splunk

Of these, BigML and Splunk are, in my opinion, the more useful. You can find out more about the results from this analysis as a series of posts on my blog at <http://phd.tripos.biz>.

Conclusion

Screenplay analytics clearly has a long way to go both in theory and in practice but some interesting results are emerging, for example in the use of correspondence analysis of screenplay content in this paper - [The Structure of Narrative: the Case of Film Scripts](#).

The lack of any substantial screenplay analytic functions in today's screenwriting applications will undoubtedly change as the interest in applying 'big data' analytic techniques to all kinds of data- including screenplays - takes off.

Many people will no doubt find the whole idea of screenplay analytics anathema and contrary to the whole 'creative schtick' of screenwriting. I don't share that view. To me, analyzing the screenplay evidentially via the data is simply another way to ask questions of your script. A quantitative approach that both complements and supplements the intuitive qualitative approach.

Screenplay analytics perhaps has less utility when dealing with a single screenplay than when analyzing a corpus of scripts - say for genre analysis or to analyze a long-duration TV show or all the work by a specific screenwriter. For as Robert Franzosi (2010:5), another advocate of quantitative narrative analysis, puts it:

I quantify simply because I have far too much information to deal with qualitatively.

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