Description
The Max 5 MSP patch makes use of data input from a .txt file and attempts to sonify the
data to create a sound. Specific information and instructions are provided in the patch itself.
The data itself was retrieved from both the Google Trends and Google Insights services –
which provide information based on their own analysis of keywords in Google searches.

Function & Purpose
The patch attempts to sonify data of the “level of user interest” in the keywords ‘sunglasses’
and ‘coats’ over time (initially the keywords were not this particular, but I have chosen them
for the assignment because they provide a more clear result in terms of trends). The level of
interest is determined by Google, but most likely takes into consideration the quantity of
searches featuring the keyword. The main purpose of this patch is to provide a new and
unique way and means of perceiving data so that new trends and patterns can be observed.

The Data
The data was retrieved from Google Insights for Search1, and Google Trends2. A timescale of
February 2008 – September 2009 was set as the range. Random yet evenly scattered data
points were chosen and recorded.

<table>
<thead>
<tr>
<th>Date</th>
<th>Sunglasses Interest Level</th>
<th>Coats Interest Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>23 March 2008</td>
<td>71</td>
<td>23</td>
</tr>
<tr>
<td>20 April 2008</td>
<td>87</td>
<td>16</td>
</tr>
<tr>
<td>4 May 2008</td>
<td>92</td>
<td>14</td>
</tr>
<tr>
<td>8 June 2008</td>
<td>100</td>
<td>11</td>
</tr>
<tr>
<td>15 June 2008</td>
<td>88</td>
<td>12</td>
</tr>
<tr>
<td>Etc.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

It is worth noting that observing the data in a table like above does not yield any obvious
pattern or trend. However, once analysed and sonified by the patch, it became clear.

The Results
The results of the sonification were rather surprising. A clear pattern had emerged when
comparing the sounds produced by both the sunglasses and coats (listening to both sound
files if necessary). They appeared to be complementary of each other (i.e. one being the
opposite of the other). When the pitch increased based on sunglasses data, the pitch
decreased based on coats data. Due to the fact that what seemed like a regular cycle of ups
and downs in tone and pitch, I deduced that time obviously played some sort of a factor. A
graphical representation of the data seems to support this.

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1 http://www.google.com/insights/search/
2 http://www.google.com/trends
It is now obvious that the current season influences the “interest level” of users to those specific keywords, though, not surprisingly as coats are primarily for winter use and sunglasses for summer. To emphasise this, the traffic levels of each are shown below:

Though not entirely surprising in theory, it was rather startling that the audio processing that I had performed on the data had revealed a pattern that I would have otherwise not known. This phenomenon could be somewhat useful for those researching consumer behaviour and psychology.

At first the data (interest level of the keyword chosen) is given to an interpolating oscillator (cycle~), setting the frequency to 1000. The patch itself was designed to create rather high-pitched tones to make it easier to distinguish between high and low values. What would output the frequency of the sound wave first passes through a triangular oscillator.

The patch uses the interest level data as the primary data to be used to generate the sound. The difference between interest levels of sunglasses and coats is then used to alter the frequency of the sound, as observed through the spectroscope in the patch. Therefore the slower the “oscillation”, the closer the interest levels are of sunglasses and coats at that specific point in time (the opposite is also true). Overall, the patch is simple in its processes to turn the data into sound.

The patch draws upon the example patch given (Sonification of CD and Vinyl Sales) on reading the .txt file of data and also from the help files (cycle~, tri~ etc.) and Max MSP tutorials - the final product being a mixed combination of these.

The process of developing the patch itself was a sort of trial and error approach. Alterations were made to the patch until I was satisfied with it.