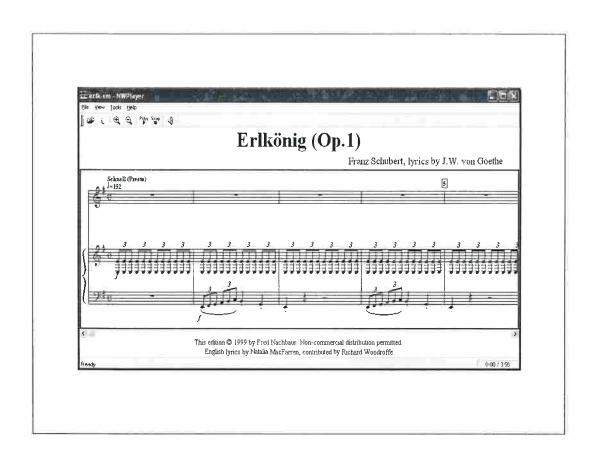
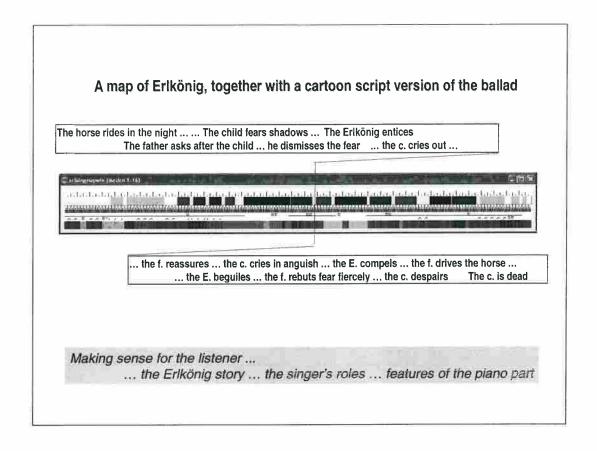
Schubert's Erlkönig

- Goethe's ballad Erlkönig was inspired by a true incident of a father who, late at night, rode to a doctor's house in a distant town and, on his arrival there, found his sick son dead in his arms.
 Schubert set the poem in 1815 at the age of 17.
- The song is renowned for its taxing accompaniment, where the right hand must sustain a repeated triplet rhythm that conveys the intensity of the horse's unrelenting ride.





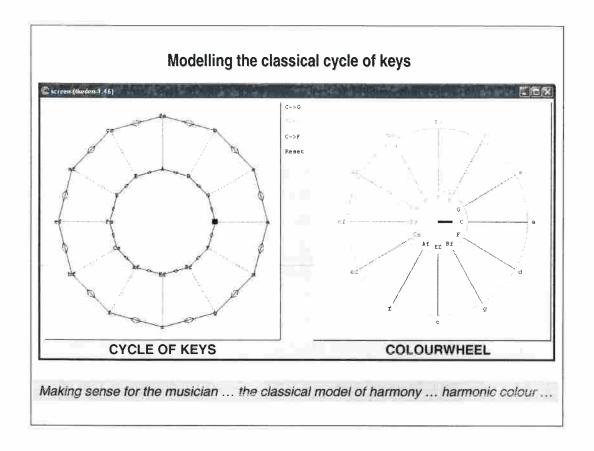
Building an artefact using the computer to capture aspects of the song

Interactive artefact

Helps to make sense for the listener and for the musician

This slide illustrates sense-making for the listener:

- the story of the ballad
- identify roles of singer, features in accompaniment
- gives an overall sense of the shape of the song



Sense-making for the musician ...

- -Schubert famous for use of harmony
- -- cycle of keys C major "no sharps or flats"
 - -- add sharps to move anti-clockwise around the cycle
 - -- add flats to move clockwise

Cycle of keys is associated with a mathematical object - "a group"

- -Colourwheel associated colours with the keys by a mathematical formula
 - -C E A-flat get the primary colours etc

Making sense for the musician ... noticing a harmonic conflict ...

Tonic major-minor ambiguity in Erlkönig

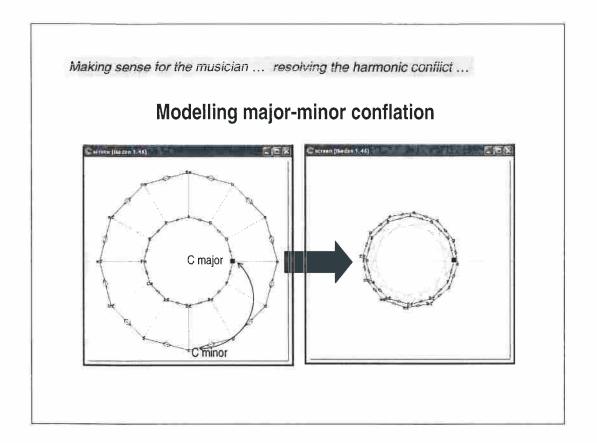
G major
G major
G major?
G minor

This extract from Erlkönig isn't in the MAJOR or the MINOR ...

A problem that arises ...

There are passages in the song where the music isn't in the major or the minor key but in a major-minor mixture ...

Can't represent this by a node in the cycle of keys ... doesn't make sense



Solution adopted is to map the cycle of keys down to a single ring when this ambiguity arises (applying a "group homomorphism")

Making sense of the major-minor conflation ...

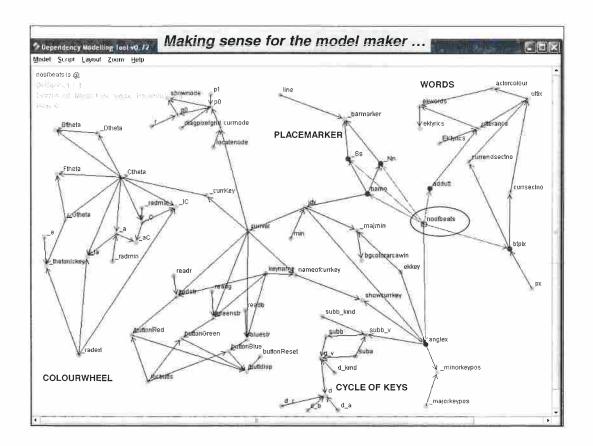
Harmonic devices illustrated in the map of Erlkönig

The use of major keys in conjunction of the Erlkönig role
The static tonality in the final ride
The remote point of arrival

Compare: settings by other composers such as Loewe the initial lack of explicit minor tonality in the texture

How the harmonic texture reflects and complements the story of the ballad Helps to make sense of the story

"He reached his home in doubt and dread"



Sense-making activity has to accompany the construction of the artefact

Uses observables (nodes) and dependencies (edges)

Small subset of the observables, showing what depends on the number of beats elapsed since the beginning of the song (noofbeats circled in 'red').

The orientation of the colourwheel, the state of the cycle of keys, the current role of the singer, the words being displayed, all depend on this observable directly or indirectly, as diagram shows.