What is it?
We have created a database of MIDI recordings performed by professional Chicago jazz pianists using lead sheets. These performers marked their performances with measure, beat and structural branch point information, encoded as MIDI data. A structural analysis of each performance has been created by a conservatory-trained professional jazz pianist. This database will be useful as training and validation data for a jazz score following program.

Motivation
Existing score following databases assume faithful performance of fully notated music. While current models may be effective for following notated "classical" music, they have little interpretation that departs from the lead sheet. Our database contains a total of 36 performances divided into 3 sets, constituting 12 performances for each of the jazz standards Nica’s Dream, Dindí and Without A Song.

Study Design
Twelve pianists each gave three different performances scaled to three subjective levels of difficulty, ranging from a performance closely adhering to the given lead sheet to a more "free" interpretation that departs from the lead sheet. Our database contains a total of 36 performances divided into 3 sets, constituting 12 performances for each of the jazz standards Nica’s Dream, Dindí and Without A Song.

The Marking Task
Fig A: Lead Sheet excerpt

Results
In comparing the musical information provided on a lead sheet with the marked performances of professional musicians, we have identified structural and stylistic variations that a score-following program must take into account. This database is available on request.

Graphical Representation

<table>
<thead>
<tr>
<th>Song Title</th>
<th>Without A Song</th>
<th>Dindí</th>
<th>Nica’s Dream</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total performance variations from lead sheet</td>
<td>7</td>
<td>8</td>
<td>10</td>
</tr>
</tbody>
</table>

Observations
The structural variability in our corpus indicates that a score following program must take into account not only improvised changes in section order, but also architectural deviations such as mixed meters and possibly unintentional deviations such as dropped or added beats. Thus, a score following program must be able to determine the downbeat of an upcoming measure without relying on the lead sheet’s instructions. The proliferation of dropped and added beats in the recorded performances suggests a flexible following system is needed to accommodate these alterations.

The most common variations were the improvised form variation and the improvised coda. We also found that often the last section of the final melody statement (“out-head”) was often abridged prior to an improvised coda.

To obtain access to database:
Email Dr. Bryan Pardo: pardo@northwestern.edu
More information: http://music.cs.northwestern.edu