Help and documentation: 10a

Please consider how the information regarding movement from the previous frame of Labanotation is identified in the Symbol Inspector, the Score Editor and the Laban Reference Library.

Figure 100. Heuristic Evaluation Storyboard 22
Figure 101. Heuristic Evaluation Storyboard 23
Effectiveness: 11a

Figure 102. Heuristic Evaluation Storyboard 24
Effectiveness: 11b
Please consider the function of the Score Editor, Movement Editor and the Symbol Inspector in relation to each other.

Figure 103. Heuristic Evaluation Storyboard 25
Designers and filmmakers use storyboards to provide a visual snapshot or overview of potential actions that may give structure to an activity (Beyer and Holtzblatt, 1998; Pruitt and Grudin, 2003; Thomas and Johnston, 1995). For the purposes of this research, individual storyboards were used to represent the interface design of the proposed prototype application LabanAssist. Each storyboard was designed to represent the actual content that an end-user of the proposed system would encounter in a variety of functional user situations. Storyboards were presented to each of the evaluators on an individual basis as low-fidelity paper prototypes of the proposed system (Preece et al., 2002; Snyder, 2003). While the heuristic evaluation focused on the visual form of the interface for LabanAssist, the interaction of the system was suggested through the sequential manner and the presentation of interface items and artefacts. This was achieved through the arrangement of various storyboards that were structured to illustrate the significance of a specific heuristic with regard to a function of the proposed system.

The method of evaluation of the interface design of LabanAssist required experts to strongly agree, agree, remain neutral, disagree, or strongly disagree with the questions posed in relation to a specific design heuristic. Evaluators were also asked to identify areas in the storyboards of the interface design of LabanAssist that they thought were confusing, or that they thought might be confusing for an end-user of the proposed system. Problems identified were described as additional comments beneath the series of set questions, and were evaluated for the extent of their severity.

Severity scales were measured on a scale from 1–5, and indicate a problem that is:

1. Imperative to fix
2. Important to fix
3. Not urgent
4. Low priority
5. Not a problem.

The extent to which these are measured are on a scale from 1–3 indicate that:

1. The problem is widespread
2. Is found in several places
3. Is a unique case.
Individual research outcomes from the expert heuristic evaluation presented significantly different results between that of the Labanotation experts and the design experts. This was because of the perceived inability of the design experts to comment sufficiently on the information they were asked to evaluate. Heuristic evaluations of proposed systems design outcomes typically involve experts in the fields of human computer interaction, interaction design, and human factors research (Shneiderman and Plaisant, 2005). However, communication design experts at OSU felt unable to comment with authority on the interface design of LabanAssist with regard to the content and subject matter of design. These findings further highlight the difficulties surrounding the use of Labanotation for those with little knowledge of the language. Despite these difficulties, two potential issues for the development of LabanAssist were identified as a result of the expert designers’ heuristic evaluation. These results are illustrated in Figure 104. Design Heuristic Evaluation Findings 1 and Figure 105. Design Heuristic Evaluation Findings 2. While a following collaborative workshop was not conducted as a result of the findings suggested by the design experts, the concerns they raised were taken into consideration during the following iterative development of LabanAssist.

Labanotation experts who are not normally associated with such methods of evaluation were able to follow the suggested heuristics for design and completed the evaluation. Because of the vastly different outcomes between the two groups of evaluators, a collaborative workshop was conducted with Labanotation experts that centred on the severity and extent of problems they found critical to the interface design of LabanAssist. The problems and suggested solutions discussed in the workshop are illustrated in Figures 106–115: Dance Heuristic Evaluation Workshop Discussions. Outcomes of the collaborative workshop that involved discussions between the designer and two Labanotation experts prompted the reformation of the Movement Editor discussed further in “Iterative Development” below, to align itself better with the practise of describing movement using Labanotation.

Labanotation experts that participated in the heuristic evaluation and the collaborative workshop concerning the interface design of LabanAssist envisaged that the proposed prototype would enable users to negotiate meaning, construct understanding, enable
### Visual Communication: Expert Heuristic Results & Comments

**Category:** Movement Editor form and function  
**Storyboards:** 1A, 5A, 5B, 5C & 5D  
**Severity:** 3  
**Extent:** 1

**Comments:**

Discuss the function of the apply button on the Movement Editor. In its function in applying notation to a score the movement editor should remain open. With this in mind:

- **How would a user clear one section of the Movement Editor?**
- **How would they clear all settings?**
- **Would all the previously setting clear on release of the add button?**
- **Do the cancel and apply buttons imply a modal dialogue box which temporarily halts the program in the sense that the user cannot continue until the movement has been applied to the score?**

**New Problem Description:**

---

**Proposed Solution:**

---

**Severity**

1. imperative to fix | 2. important to fix | 3. not urgent | 4. low priority | 5. not a problem

**Extent**

1. the problem is widespread | 2. is found in several places | 3. is a unique case

---

**Figure 104.** Design Heuristic Evaluation Finding 1
Visual Communication: Expert Heuristic Results & Comments

Category: Flexibility and efficiency of use / design for advancement  
Storyboards: 7B & 7C  
Severity: 3  
Extent: 2

Comments:

Discuss the intent of designing for skill. How does the novice interface compare to the more advanced level. How could the interface for novice use be made more “intuitive”?

New Problem Description:

Proposed Solution:

<table>
<thead>
<tr>
<th>Severity</th>
<th>Extent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. imperative to fix</td>
<td>1. the problem is widespread</td>
</tr>
<tr>
<td>2. important to fix</td>
<td>2. is found in several places</td>
</tr>
<tr>
<td>3. not urgent</td>
<td>3. is a unique case</td>
</tr>
<tr>
<td>4. low priority</td>
<td>5. not a problem</td>
</tr>
</tbody>
</table>

**Figure 105.** Design Heuristic Evaluation Finding 2
### Labanotation: Expert Heuristic Results & Comments

<table>
<thead>
<tr>
<th>Category: Match between real world and system</th>
<th>Storyboards: 2A, 2B &amp; 3A</th>
<th>Severity: 5</th>
<th>Extent: 3</th>
</tr>
</thead>
</table>

**Comments:**

(2A) Is there a need for 1/4 beat guides in the Score Editor Rules? (show with prototype).

(2B) Clarify with Participant B: Are the options provided in a digital interface comparable to the way students notate movement in a real world situation?

**Participant B’s level of agreement for 2B & 3A**

**New Problem Description:**

The necessary information contained within score guides to replicate a real world representation of Labanotation.

**Proposed Solution:**

Remove the 1/4 beat guides from the view score guides as numbers option. The main overlay score grids are more than adequate to represent the divisions of beats and measures more clearly.

---

**Severity**

1. imperative to fix | 2. important to fix | 3. not urgent | 4. low priority | 5. not a problem

**Extent**

1. the problem is widespread | 2. is found in several places | 3. is a unique case

---

**Figure 106.** Dance Heuristic Evaluation Workshop Discussion 1
**Labannotation: Expert Heuristic Results & Comments**

<table>
<thead>
<tr>
<th>Category: Error Prevention</th>
<th>Storyboards: 5A, 5B, 5C &amp; 5D</th>
<th>Severity: 3</th>
<th>Extent: 3</th>
</tr>
</thead>
</table>

Comments:

**Discuss Participant A’s comment regarding the option to leave a selection as the right side of the body supporting in 5b.**

**Discuss the notion of error prevention and clarify Participant B’s level of agreement for 5A.**

New Problem Description:

Selection of body areas and error prevention.

Proposed Solution:

The notion of error prevention can only be probable. As Participant B suggests the complexity of such a system would reveal unknown elements of use that can lead alternate causes of error.

The functionality of the movement editor will not literally allow one whole side of the body to be selected. It works on the selection of specific parts of the body in relation to time and space. The initial red highlight of the body is only a representation of the immediate selections made in the movement editor.

---

**Severity**

1. imperative to fix | 2. important to fix | 3. not urgent | 4. low priority | 5. not a problem

**Extent**

1. the problem is widespread | 2. is found in several places | 3. is a unique case

---

**Figure 107.** Dance Heuristic Evaluation Workshop Discussion 2