Dance Motion Segmentation Method Based on Choreographic Primitives

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- ex) step, turn, jump...
- dancer perception







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Candidate point A and C are shifted to the nearest musical beats. Candidate point B is regarded as false detection.

5. Result

Accuracy of the candidate points

Correct answer

 The beats selected by all dancers (in Section 2) Comparative approach

- - Musical 4 beats (only musical feature)

 Table1. Verifying the accuracy of our method

	Our Method	Shiratori et al.	Musical 4beats
Precision[%]	62.5	7.7	50.0
Recall[%]	80.0	4.0	60.0

Synthesizing new series of dance motions

Connecting the detected short motion segments randomly. Then we asked 12 participants to select the one which they considered the better of the two resulting motions.

Table2. Result of the evaluation experiment

Percentage[%]

Our segmentation method is effective for synthesizing natural dance motions.

5 Future Work

Shiratori, T., Nakazawa, A., and Ikeuchi, K., 2004. Detecting Dance Motion Structure through Music Analysis. In Proc. IEEE International Conference on Automatic Face and Gesture Recognition (FGR 2004), 857-862.

4. Refinement of Candidates using Musical Beats

Choreographic primitive boundaries are synchronized to musical beats.

Musical beat

- : The middle of musical beat
- Specified region
- : Segmentation candidate point

• Shiratori's Method (only motion feature) [1]

Figure 1. Example of a new series of dance motion

ur Method	Musical 4beats	
66.7	33.3	

Applying the rules to the music which is not quadruple time