ID# 188

"Ensuring Agile Power to the Edge Approach in Cyberspace"

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Contents

- The Proposed Approaches

- Extensive development and maintaining high quality information structures

- Semantically Structured Information Model

- Modeling the self-synchronized force approach

- Processing flow of the proposed approach

- Evaluation of above approaches by orchestra organization without conductor

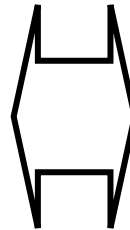# Cyberspace management conceptual framework

Required Properties

- Shared Information
- Shared Awareness
- Shared Understanding
- Self Synchronization
- Collaborative Decisions

Proposed Methodologies

- Hybrid Organization
- Role of Leader
- Role of Subordinates
- Creativeness
- Evaluation

Proposed Methodology; "Mori Method"

Hybrid Organization,
Backward & Random Allocation

⬇

Anticipation of Director

⬇

Anticipation of Player

⬇

Semantically Structured Imagination

⬇

Process Flow, Feedback system

Required properties for NCW/PTE

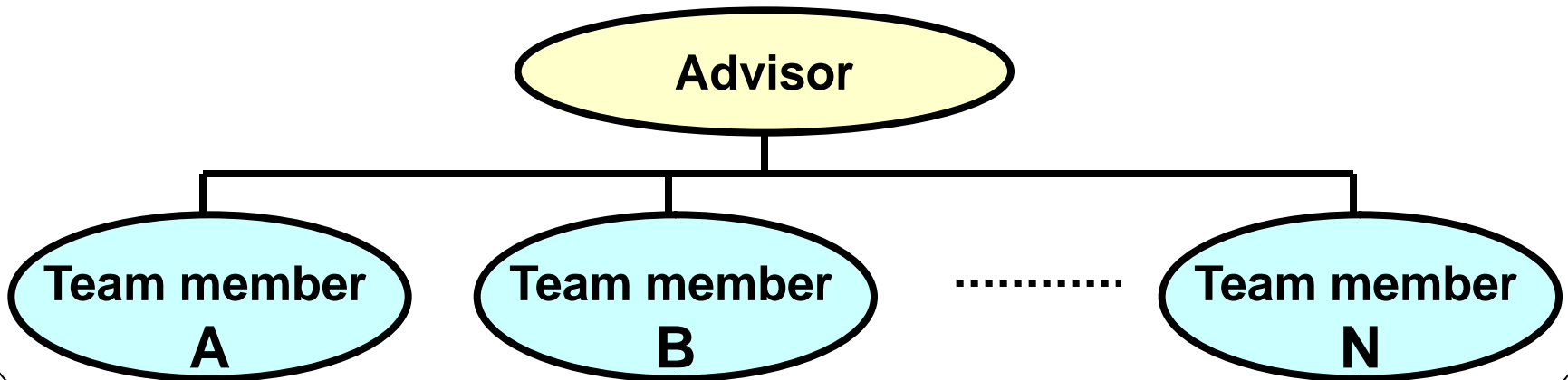**(1) Shared Information**

(2) Shared Awareness

(3) Shared Understanding
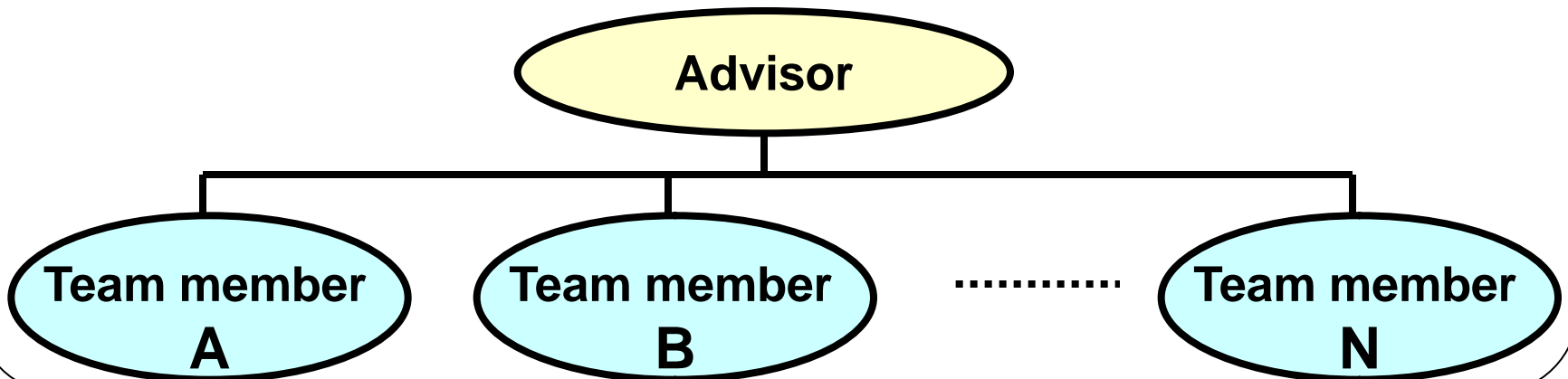
(4) Self-Synchronization

(5) Effectiveness
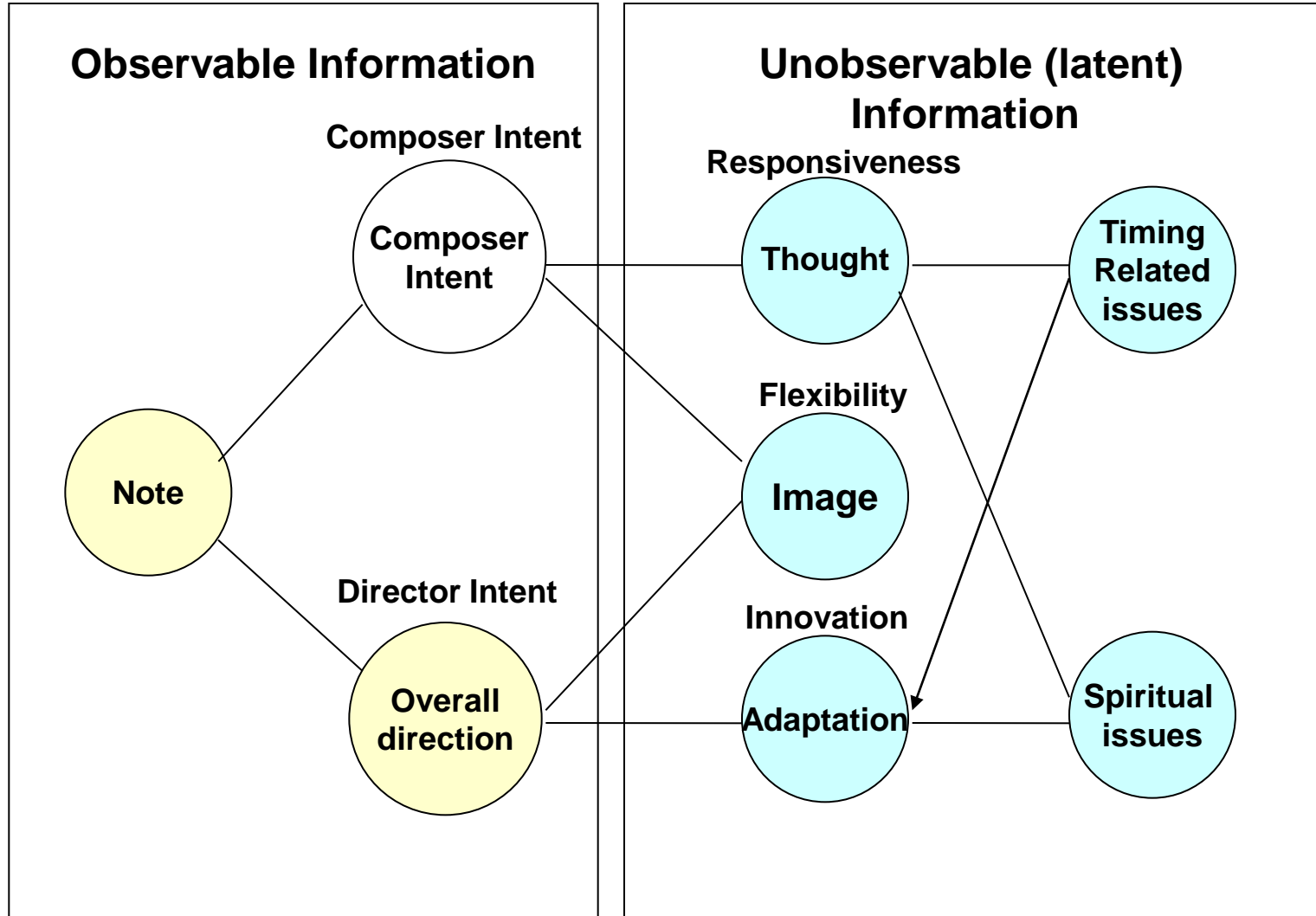
Hybrid Organization

Hierarchical Organization

```
        Advisor

Team member    Team member    ·········    Team member
     A              B                            N
```

Iteration

Flat Organization

```
        Advisor

Team member    Team member    ··········    Team member
     A              B                            N
```
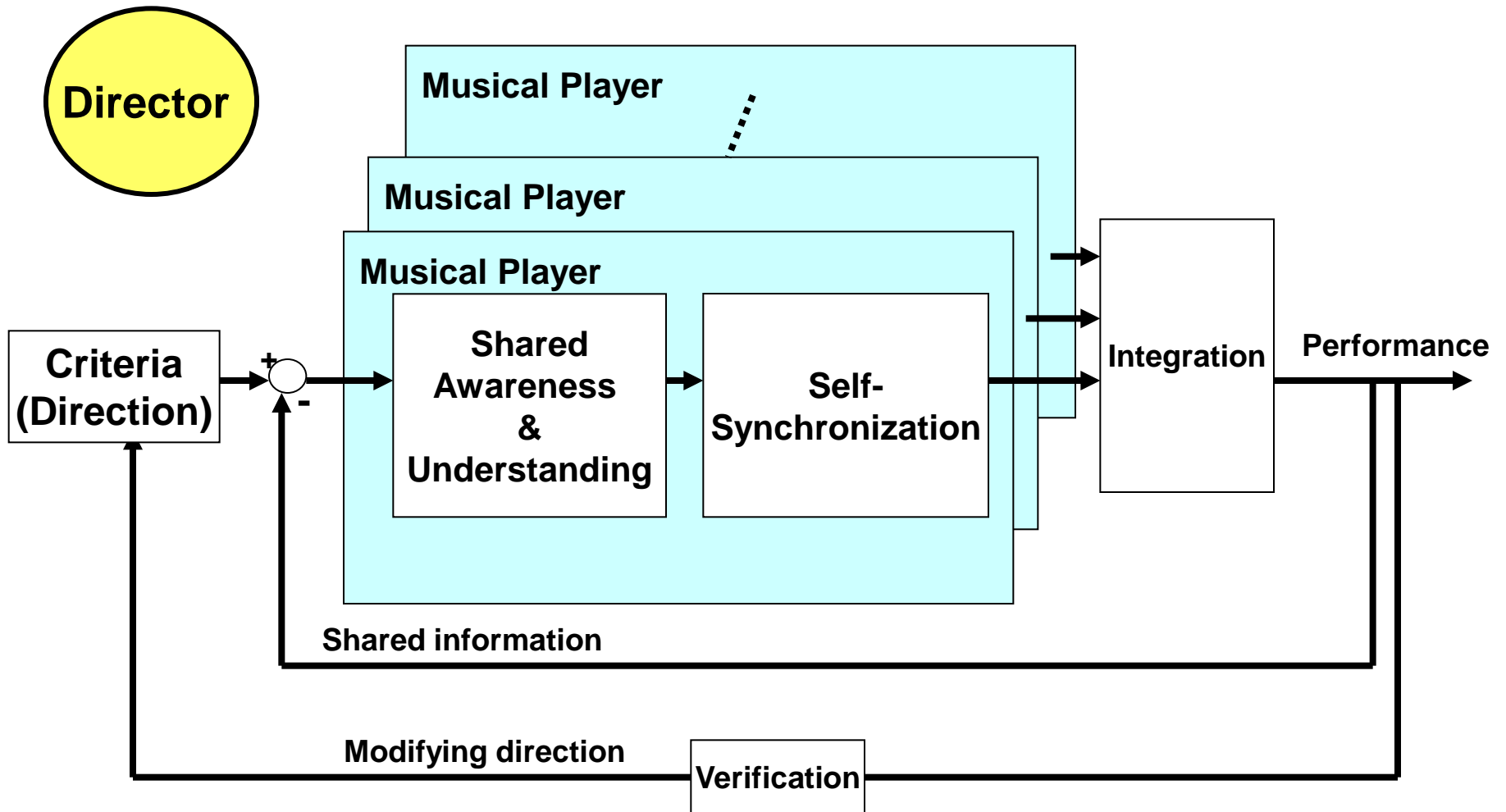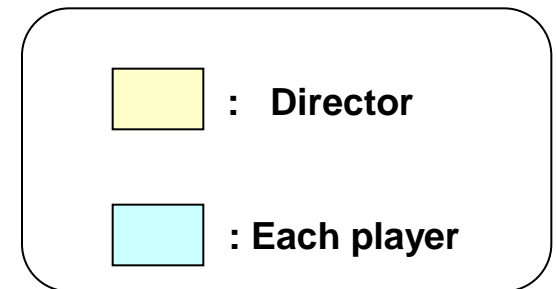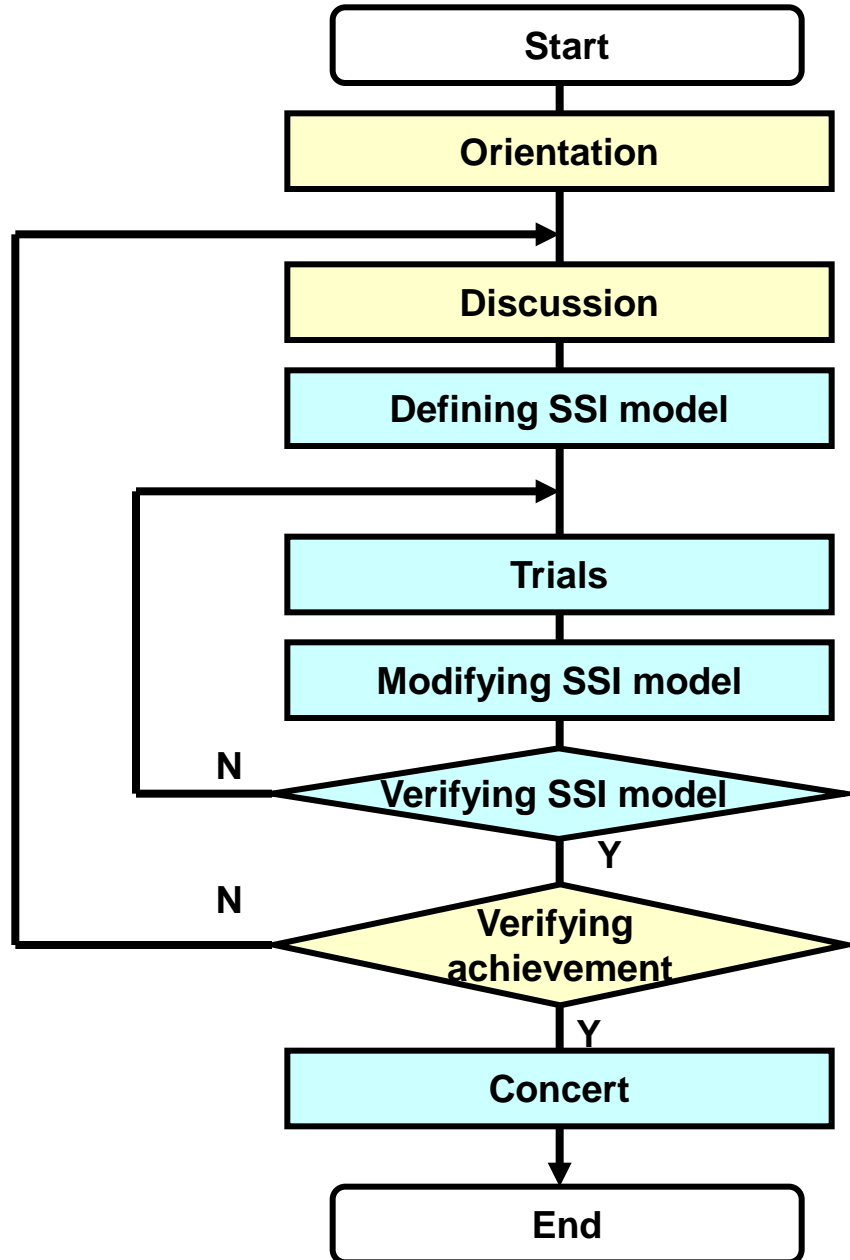
Observable Information /Latent Information for Each Players
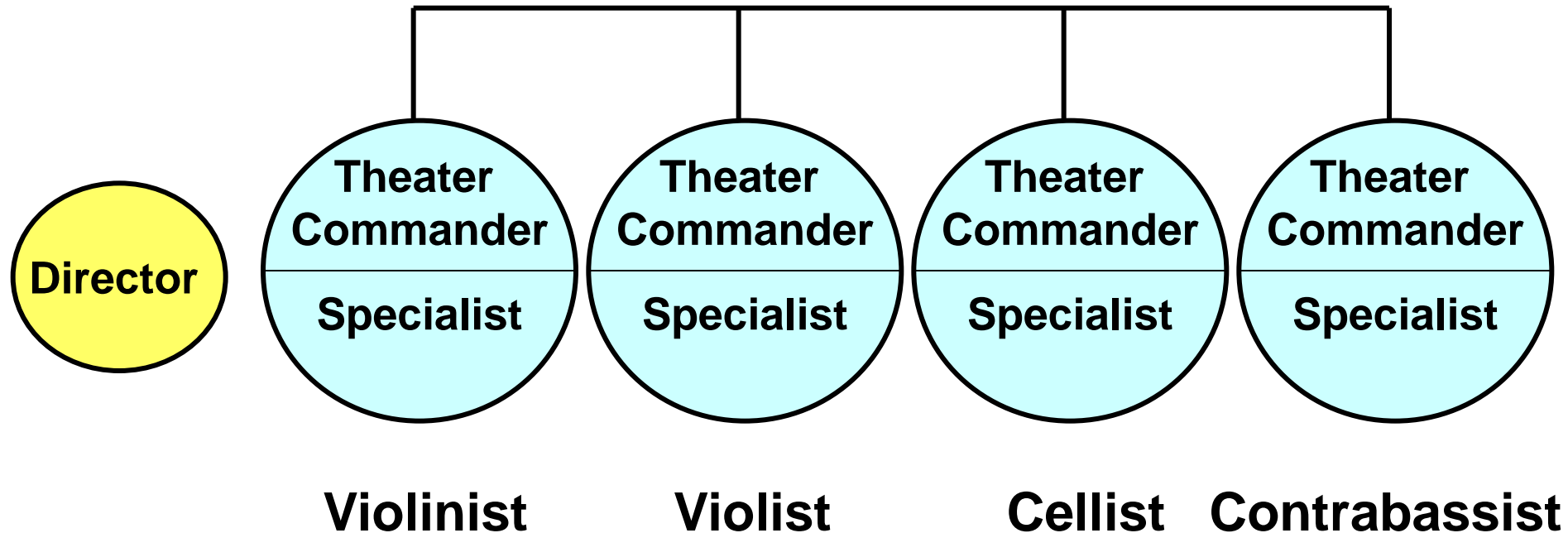
Feedback system for internal processing

Process flow of Mori Method

Verify our approach by String Orchestra without Conductor

Backward and Random Allocation of String Orchestra (without a conductor)

2nd. Violin

Contrabass

Viola

1st. Violin

Cello
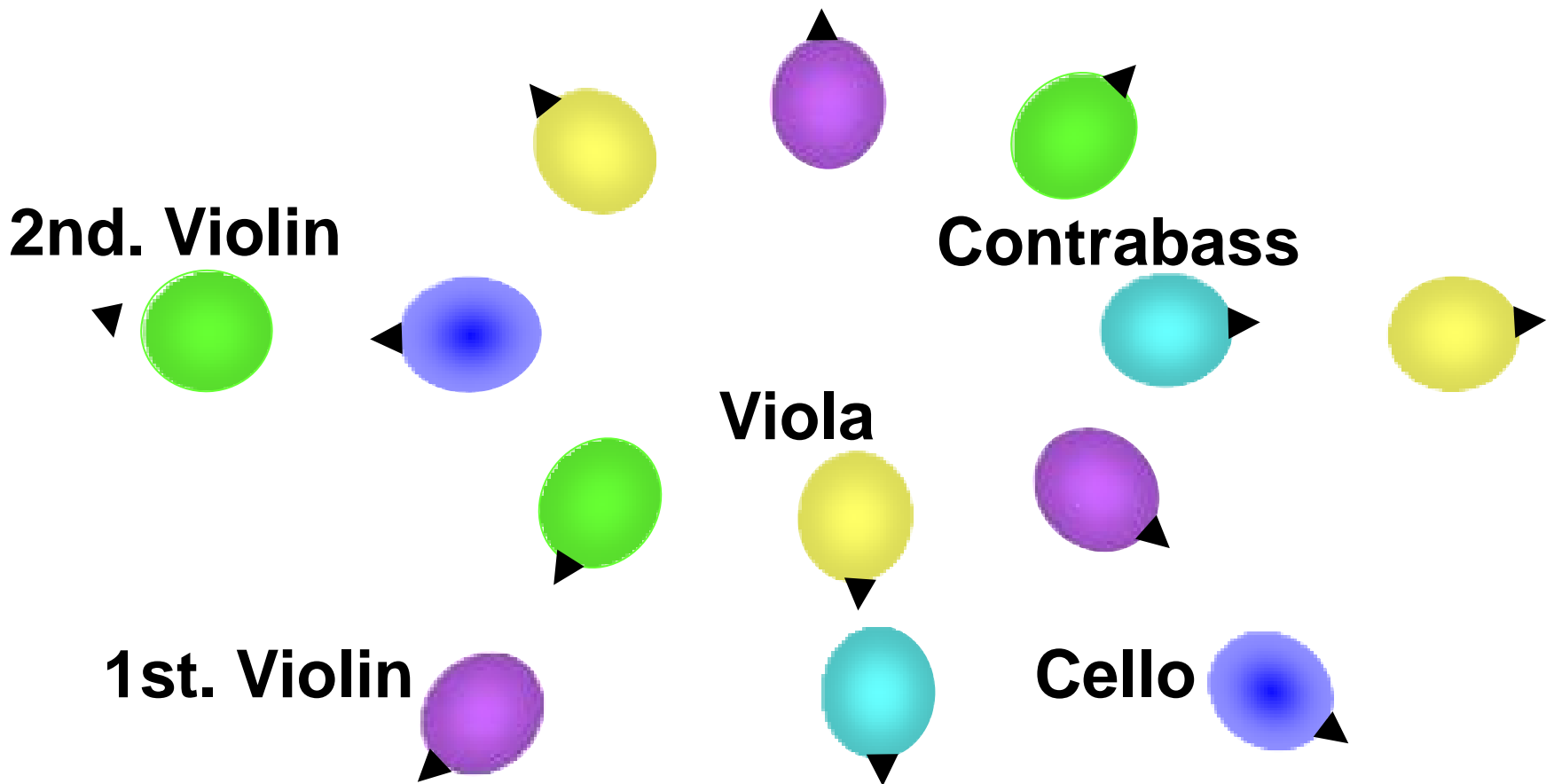
Hypothesized unobservable variables (SSI model)

Observable Variables

Unobservable Variables

Note

Musical Director Intent

0.7 — Composer Intent

0.3

0.7

0.3

0.3

Composer Image

0.7 — Scenery

0.3

0.7 — Articulation

0.3

0.3

Timing Issues
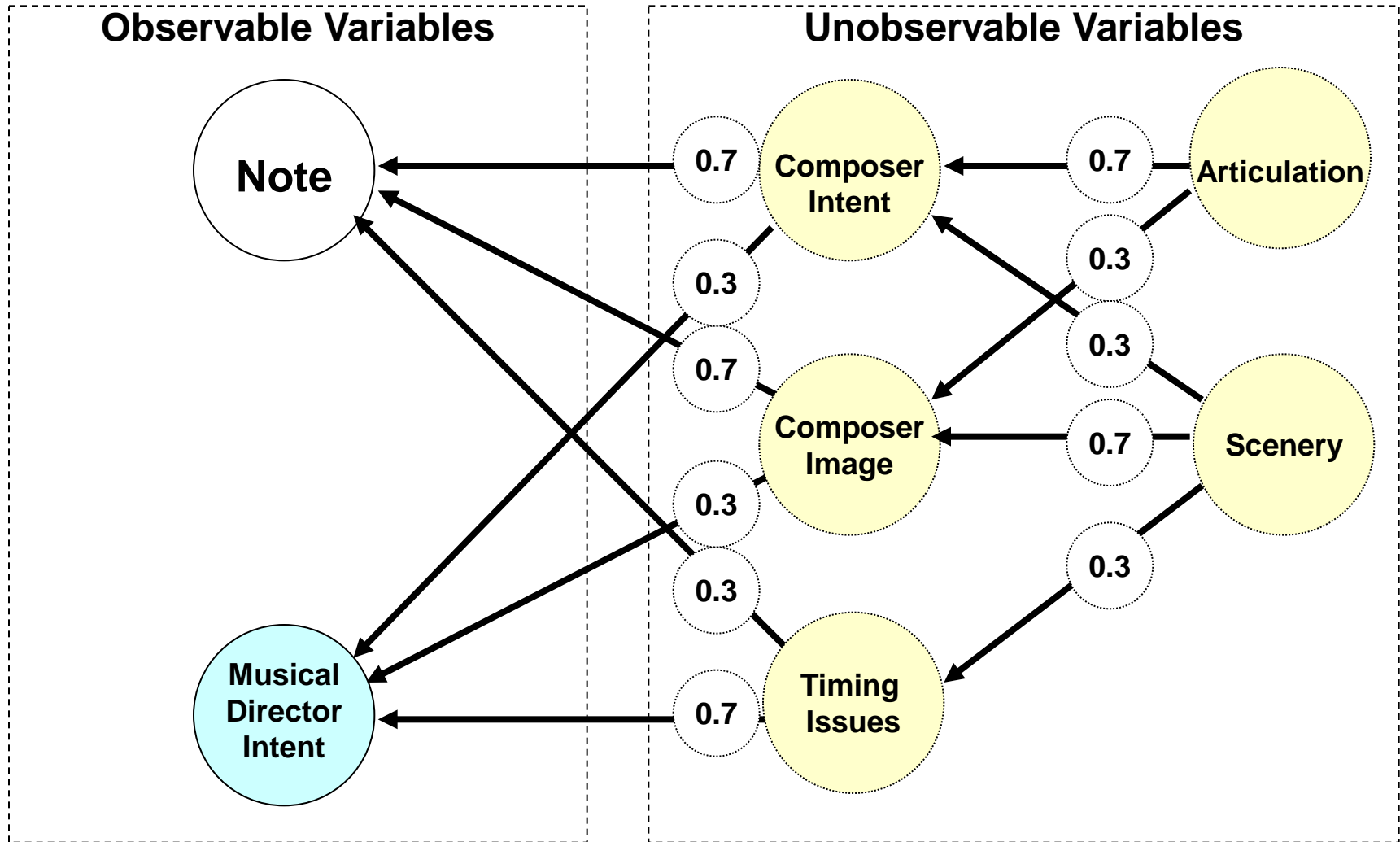
Questionnaire form

Sheet 1:

Not deep   **Deep**

In performance   **in performance**

Sheet 2:

Not responsive   **Well responsive**

Sheet 3:

Not innovative   **Well innovative**

Sheet 4:

Not interactive   **Well Interactive**

with audience   **with audience**

Sheet 5:

Not alive   **Alive**

Sheet 6:

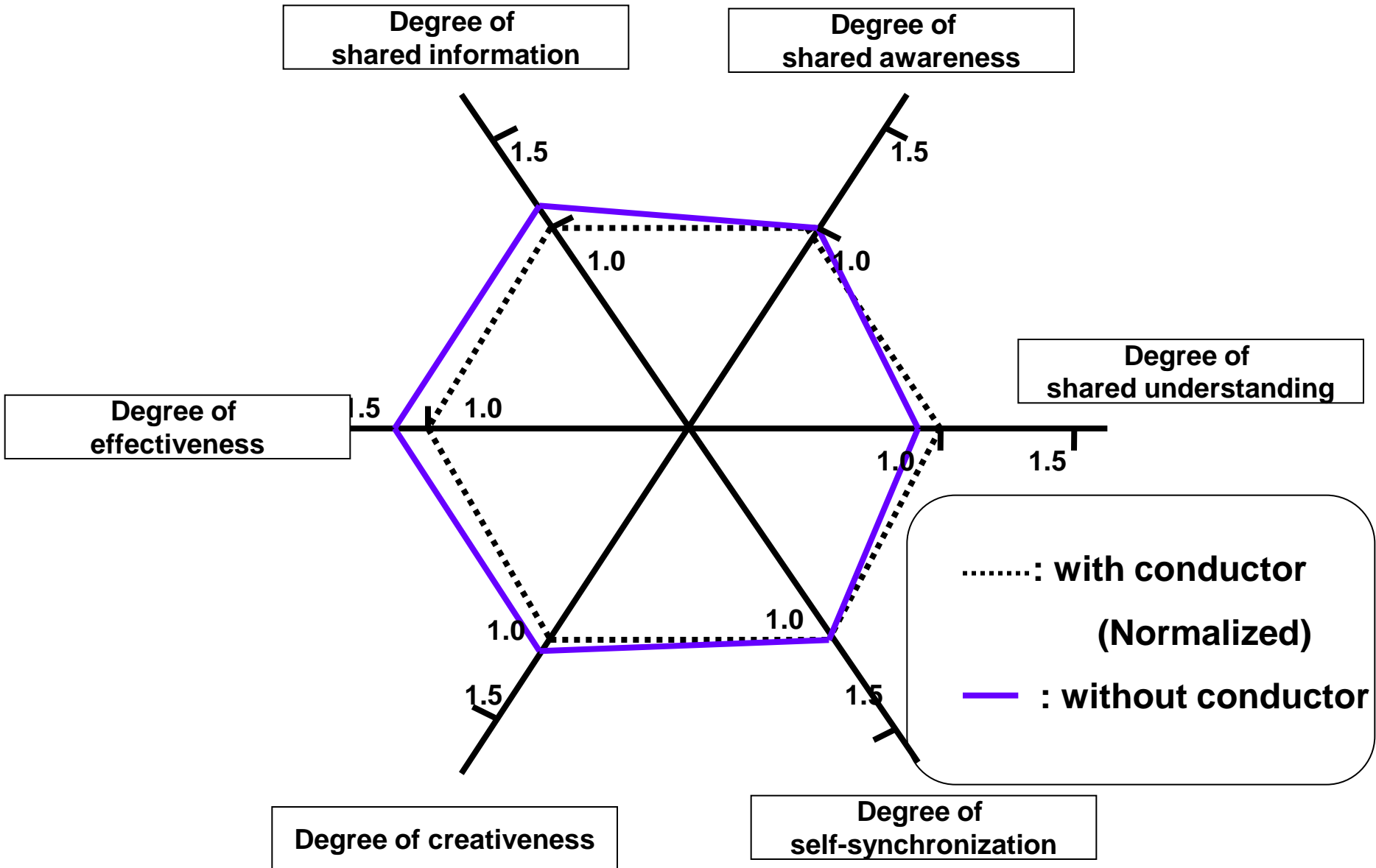**Not Spontaneous**   **Very spontaneous**

Response for the questionnaire

Self-synchronization (time-based)

Normalized interval time

・Ensemble
 without Conductor

・Ensemble
 with Conductor
 ━━━━━

: Normalized interval time

Z axis: Stringendo
X axis: Ritardand
          & Felmata
Y axis: Pause