

# Rotating Mirrors

Joshua Gutwill

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THIS IS **NOT** A DEFINITIVE FINAL REPORT

FORMATIVE evaluation studies like this one often:

- **are conducted quickly**, which may mean
  - small sample sizes
  - expedited analyses
  - brief reports
  
- **look at an earlier version** of the exhibit/program, which may mean
  - a focus on problems and solutions, rather than successes
  - a change in form or title of the final exhibit/program

# Rotating Mirrors

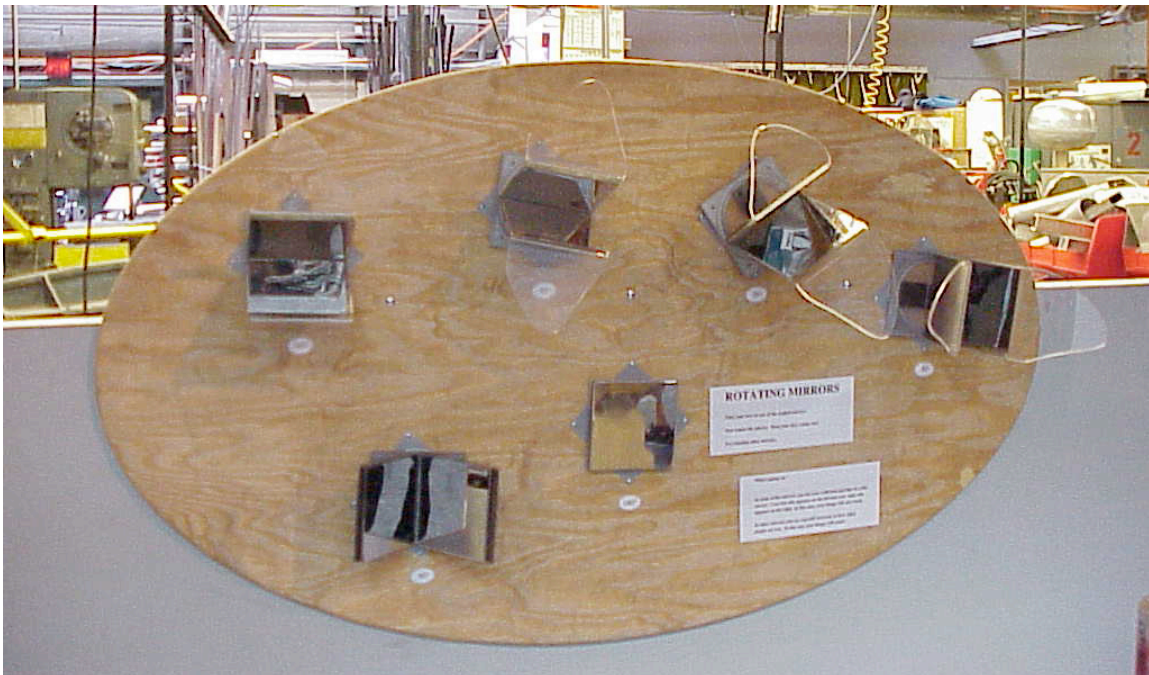
## Formative Evaluation report

### Joshua Gutwill

7/25/02

#### Goal

To provide feedback about the first mock-up of Rotating Mirrors. See photo of exhibit below.



#### Method

We audio/videotaped visitors at the exhibit for 4 hours on 7/12/02. Analyzing the tapes, we looked for:

- Holding time
- Number of different mirrors into which visitors looked
- Visitors' general engagement with the exhibit

## Results

The median holding time for the exhibit was 33 seconds. However, the median holding time for visitors went up when they seemed excited by the phenomenon. Hence, we split the visitors into three types based on their degree of engagement with the exhibit:

- 1) Visitors who spun the mirrors, looked inside, and seemed excited or surprised by the result (e.g., they said “wow,” “neat,” “cool,” or told others to look)
- 2) Visitors who spun and looked into the mirrors, but did not seem excited or surprised
- 3) Visitors who failed to spin the mirrors or look into them, but touched the exhibit in some other way.

As shown in Table 1, the holding times for the three groups were significantly different ( $F_{115} = 28.9$ ,  $p < .0001$ ). The mean number of mirrors used by the three groups was also significantly different ( $F_{115} = 25.8$ ,  $p < .0001$ ).

**Table 1. Holding time and number of mirrors used by degree of engagement**

Degree of engagement	Visitor groups	Median holding time (seconds)	Mean # mirrors used
Spin, look and seem excited	35 (30%)	67	6.4
Spin and look, no excitement	71 (60%)	23	2.4
Fail to spin or look	12 (10%)	9	2.8

## Conclusion

It seems that visitors are having difficulty getting into the exhibit and noticing the surprising phenomenon of spinning images in the mirrors. Those visitors who do notice the phenomenon and get excited by it spend more time and use more mirrors than those who do not. This suggests that initial engagement could be improved by helping visitors notice the spin phenomenon. At this mock-up phase, there were few visitors who seemed to be engaged in a prolonged way.

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