

# Introduction of OSJ Disc Handling WG

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# OSJ Organization

Chairman : Dr. H. Nakajima

Secretariat

Board Meeting

General Meeting

Logical  
WG

WG for the  
Logical issues

Physical  
WG 1

WG for  
over 4x  
recording

Physical  
WG 2

WG for  
CD-RW  
issues

Document  
Regulation WG

WG for the  
Documants regulations

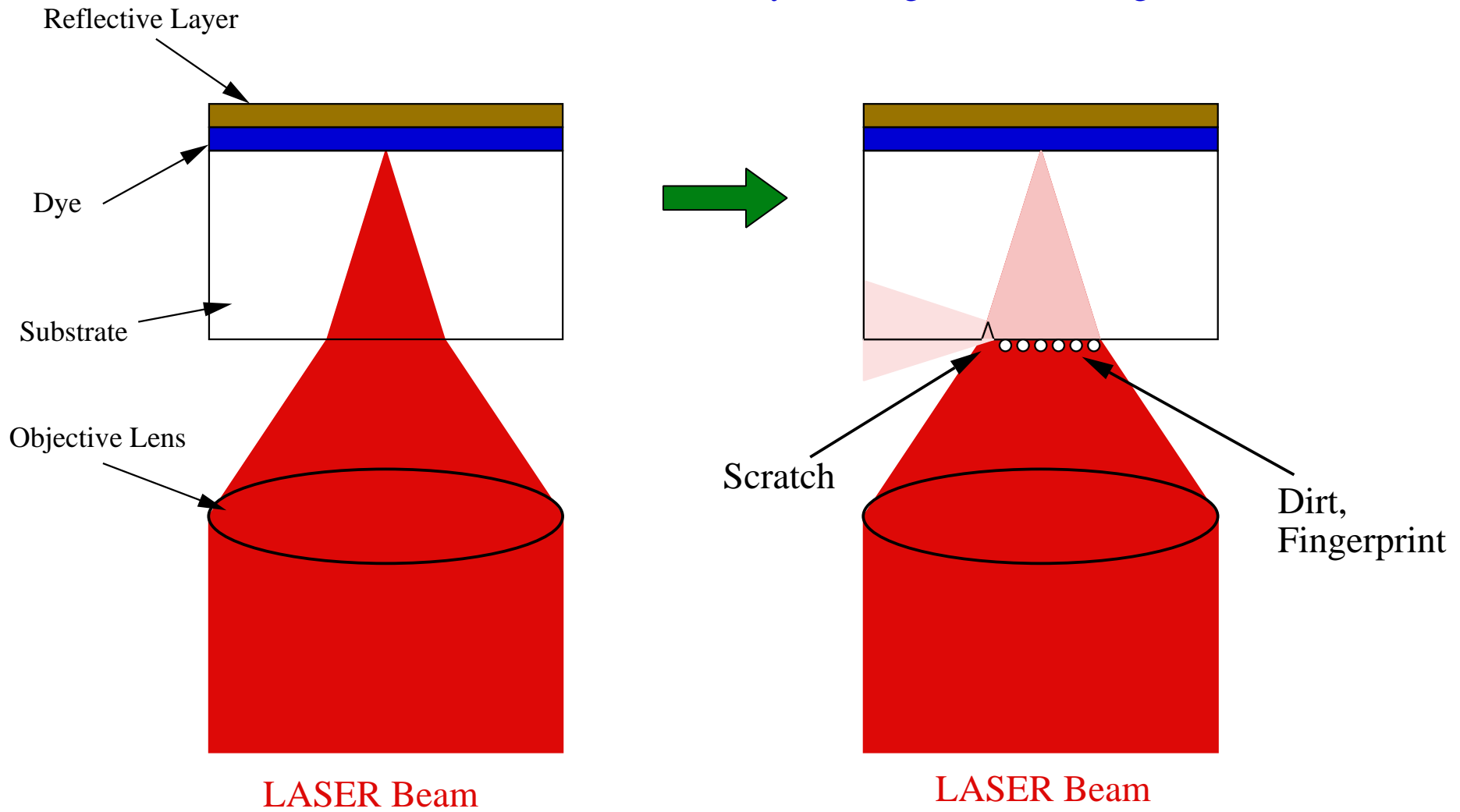
Promotion  
WG

WG for the  
CD-R/RW  
promotion

Disc Handling  
WG

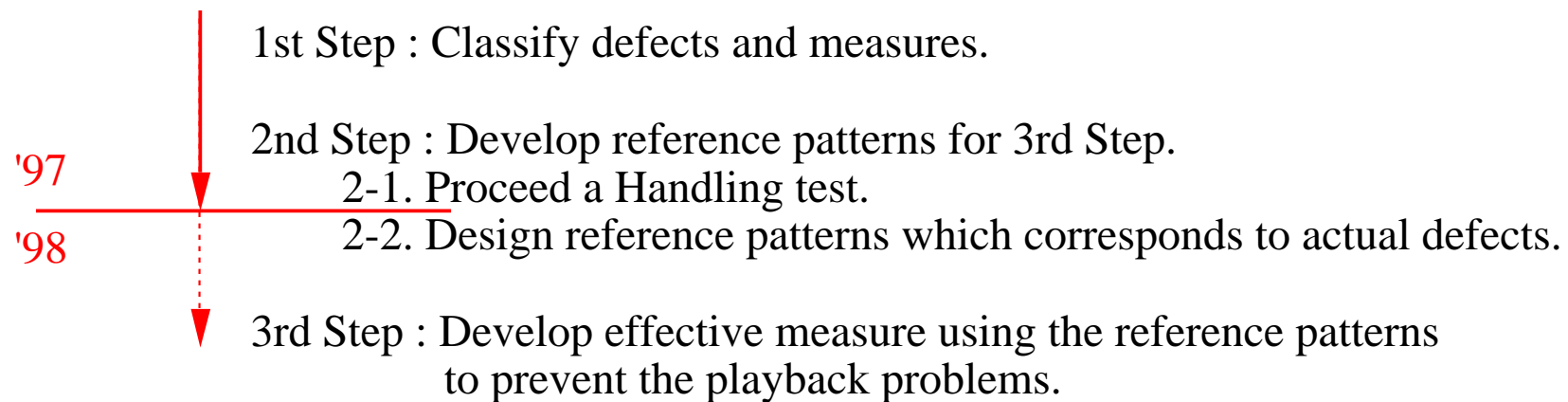
WG for the  
Disc Handling

### Possible Errors caused by the rough disc handling



## The road map of WG

Drive and Media manufacturers work together to solve Disc Handling Problems.



## Classification of Defects

1. Fingerprint
2. Moisture(Saliva)
3. Scratch
4. Ink
5. Oil
6. Paste or Glue
7. Dint

## Measures for preventing errors from defects

1. Running OPC

2. Defect management

No effective defect managements could be find because of the restriction of the CD standard.

measure for attached defects ↑

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3. Hard coat of disc surface

prevention of defects ↓

Not effective without causing the ill effect like the defect enlargement or the cost increasing.

4. Enlightenment of users

5. Cartridge

## Reference Patterns

Specially designed to develop countermeasures to defects of CD-R.

**Schedule :** 1st Evaluation Sample has developed.  
Design of the improved patterns are now in progress.

**Color :** Black Ink and Transparent Ink.  
Transparent ink cannot be inspected.

**Shape :** Line patterns and Dot patterns  
Line pattern corresponds to scratch.  
Dot pattern corresponds to fingerprint.

## Handling test

Goal : Investigation typical defects caused by handling.  
Results are contributed for making "Reference Patterns".

Schedule : April, '97 ~ March, '98

Subject : WG members (16 companies)

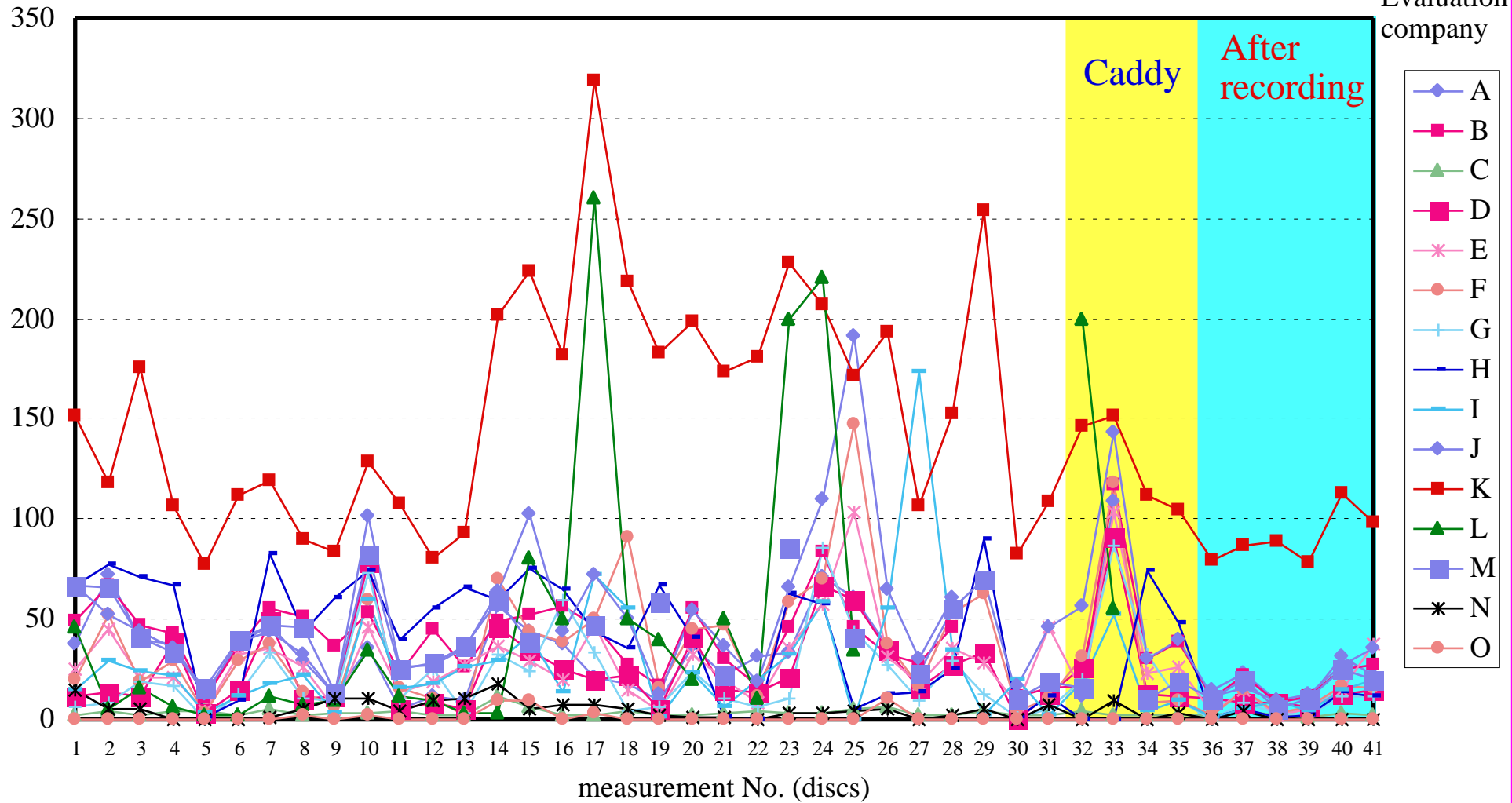
Evaluator : WG members (18 companies)

Test Type	Persons	Handling	Caddy	Disc
A	100	1	non	unwritten
B	10	10	non	unwritten
C	1	100	non	unwritten
D	10	10	CD caddy	unwritten
E	1	100	CD caddy	unwritten
F	100	1	non	written
G	10	10	non	written
H	1	100	non	written

C1 number/sec

### Block Error Rate distributions

Evaluation company



## Test results up to 2nd step

1. Unrecorded Discs must be handled carefully compared with recorded discs.
2. The reference patterns we made were larger than the average defect size of the disc.
3. Some countermeasures to defects would be recommended for preventing possible CD-R errors.