

### Status of Crack Processing in JAPAN

- TC4.2 Workshop -



NEXCO Expressway Research Institute  
Keizo KAMIYA

### Road Surface Measuring Vehicle Committee

**Objective:** To Certificate Accuracy of Road Surface Measurement Vehicles

**Members:** Experts, Professor, Government Researchers & Suppliers

**Organizer:** PWRC

**Committee:** Annually held since 1989

**# of Vehicles:** 15 in 2005

### Road Surface Measuring Vehicle Committee

**Item:** Accuracy in Measuring Distance, Cracking, Rutting and Roughness

**Test Site:** Sections in Existing Road with Identical Degrees of Distress

**How to Asses:** Manual Measurement & Vehicle based Measurement to be Compared

### Road Surface Measuring Vehicle Committee


**Item:** Accuracy in Measuring Distance, Cracking, Rutting and Roughness

**Test Site:** Sections in Existing Road with Identical Degrees of Distress

**How to Peer:** Manual Measurement & Vehicle based Measurement to be Compared

**Criteria:** Identify 1mm wide Cracking

### Test Site



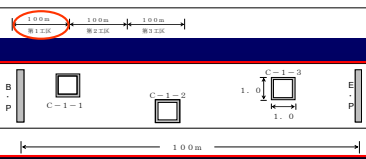
Tsukuba

R-408

Tokyo

### Test Section & Crack Block

Science City      Tsukuba



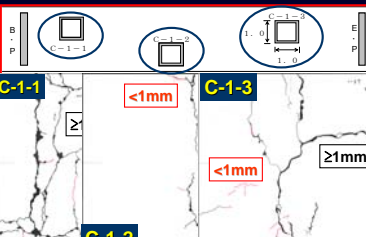
100m 100m 100m

B P C-1-1 C-1-2 C-1-3 B P

1.0 1.0 1.0

1.00m

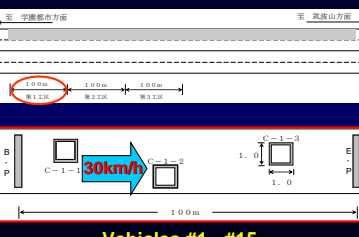
### Manual Sketches at Section #1



C-1-1 C-1-2 C-1-3

<1mm <1mm ≥1mm

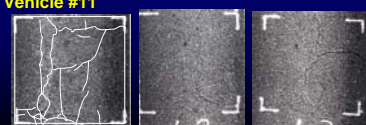
### Vehicle Run



30km/h

Vehicles #1 - #15

### Data Processing



Vehicle #11

1-1 1-2 1-3

**Data Processing**

**Vehicle #11**

Resketch

**Processing Errors @ C-1-1 (Vehicle #11)**

Running Photographic Error

Processing Error

Manual Sketch Error

**Sketch Comparison @ C-1-1 (Vehicle #11)**

Manual Sketch at C-1-1

≥1mm

<1mm

#11

**Manual Sketch from Automatic Measure @ C-1-1**

#1 #2 #3 #4 #5  
#6 #7 #8 #9 #10  
#11 #12 #13 #14 #15

**Manual Sketch from Automatic Survey @ C-1-2**

#1 #2 #3 #4 #5  
#6 #7 #8 #9 #10  
#11 #12 #13 #14 #15

**Manual Sketch from Automatic Survey @ C-1-3**

#1 #2 #3 #4 #5  
#6 #7 #8 #9 #10  
#11 #12 #13 #14 #15

**Sketch Comparison C1-1-1**

Manual Sketch at C-1-1

≥1mm

<1mm

#1

#2

**Sketch Comparison C1-1-1**

Manual Sketch at C-1-1

≥1mm

<1mm

#7

#14

**Sketch Comparison C1-1-2**

Manual Sketch at C-1-2

<1mm

≥1mm

#3

#9

