BumpRecorder

Pavement Roughness Measurement
Smartphone Application

BumpRecorder

Pavement Maintenance Management
Cloud service

BumpRecorder Web

Simple・Speedy・Low cost
Next Generation Maintenance Management Service

Winning Tokyo Venture Technology Award 2015,
the Special Award 2014

More rational and efficient roughness measurement available.
Supporting Pavement Maintenance Management.

Roughness e.g. IRI measurement available by general smartphones and cars.
Auto calibration function makes prior calibration driving free.
Results available on online maps about 10 minites later after data upload.

Simple and convenient by Smartphones Pavement Roughness Measurement

Smartphone application BumpRecorder is compatible with most models.
Free installing available through Google Play

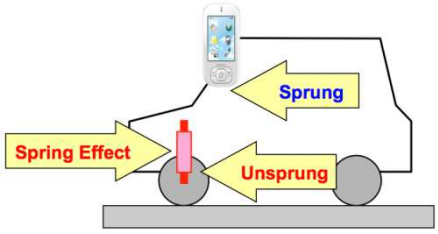
Simple Manual
Fix your smartphone firmly on a place like a dashboard. Setting style is flexible. (See the picture.)

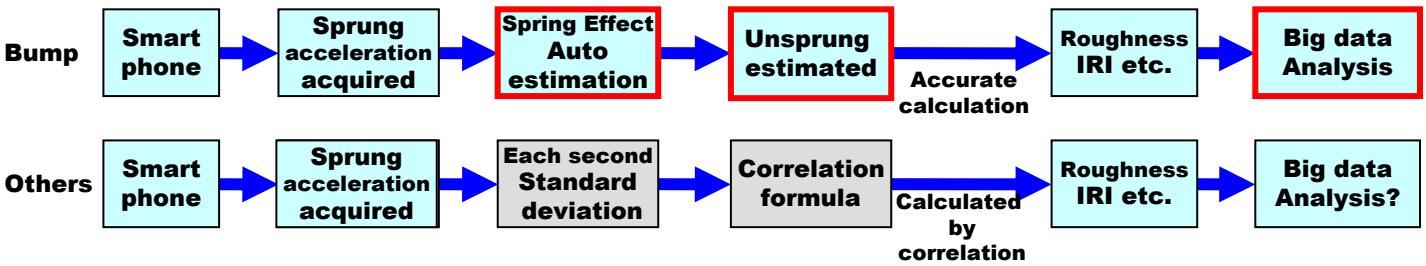
Flexible Setting Style

Further accurate measurement available

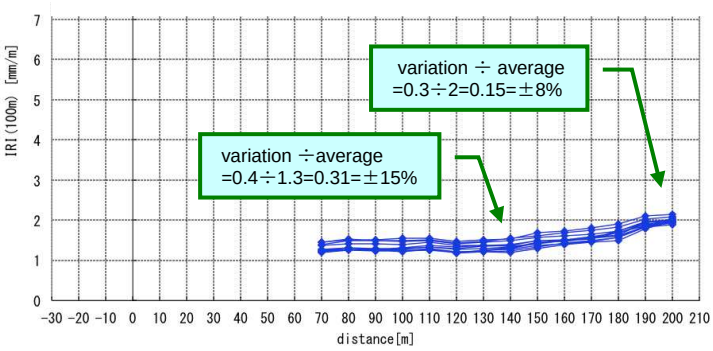
The existing response type method has difficulty in getting accurate measurement without calibration driving because of the impact of suspension, caused by the difference of car models or driving speed. In order to solve this problem, they are using compensation formula (correlation formula), which forces us to drive pavement whose conditions are already known before measurement. It requires much time and costs.

Our company can offer the technique to get stable results, regardless of the difference of car models or driving speed, automatically estimating vehicle suspension hardness and calculating an up-down motion on the center of tires, from the acceleration data through measurement driving. This technique enables users to get accurate data easily.

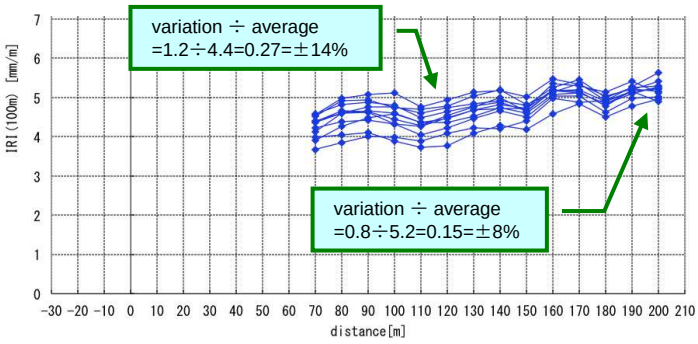




100m IRI measurement examples



Main Road（40~60km/h）



Community road（20~40km/h）

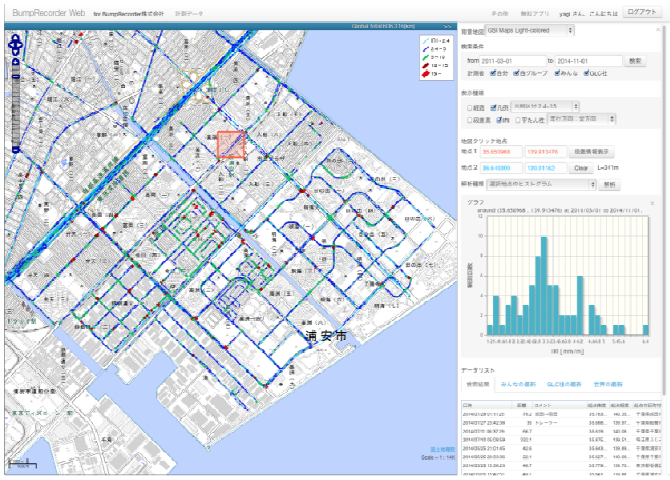
Easily confirm data on Web browsers

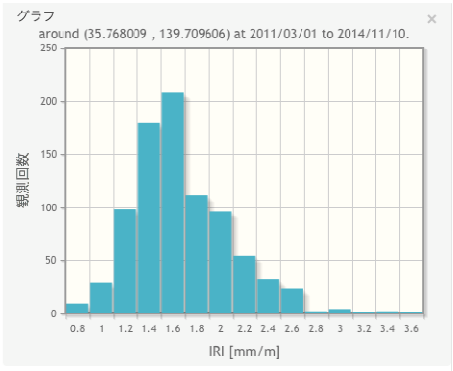
Data measured by BumpRecorder can be easily confirmed on BumpRecorder Web, our company's Web analysis service.

The existing service e.g. an inertial profiler requires several days to get the result, on the other hand, our Web analysis service can offer results quickly about 10minites later after uploading, it is almost on a real-time basis.

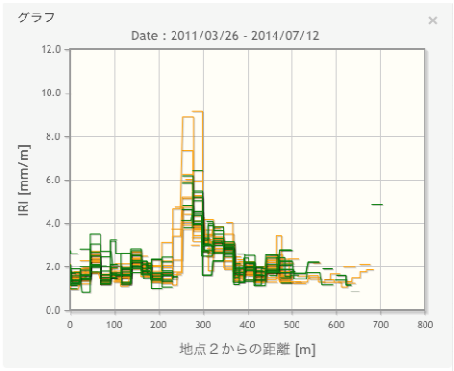
The measured results of roughness e.g. IRI can be shown with OpenStreetMap, which will enable users to immediately realize road conditions .

These data can be shown on the base of duration and direction. Also users can choose specific areas and see the result by histogram, a distance base roughness graph or a time trend graph.





Histogram



Distance base graph

Time trend graph

Available large data storage

BumpRecorder Web has already stored a large quantity of measurement data up to 1.8million km, and it is computing under good response. BumpRecorder can be used large data e.g. daily long distance measurement.

Data Output Possible

Roughness data e.g. IRI can be confirm on Web screen, which can be also downloaded as a text file. API enables users to connect their own system. BumpRecorder can provide the necessary data in a necessary form necessary timing.

Clear Fixed Rate System for frequency use

The conventional rate system of Pavement Roughness Measurement is meter rate charging system based on measured distance.

Such system requires huge costs in case of regular Pavement Roughness Measurement over all roads in charge, which is not feasible.

Our fixed rate system enables users to measure roads requiring regular maintenance as much as necessary when needed.

A monthly charge is fixed for the your management road length, regardless of the number of smartphones used and the frequency in use of measurement.

* Charge for each direction
* No additional charge for multi-lane roads

Meter rate charging system for one time usage

Calculating data of the roughness e.g. IRI based on actual measured distance/meter rate charging system is available.

Also the acquired data can be analyzed and offered by an indicator on users' request. System customize is available. Please ask us about the detail.

Related product

Photo Report Service

This Smartphone and Web service enables uses to get photos with GPS Information and comments taken by a smartphone camera and to manage it on Web map.

These services are both available with BumpRecorder Web

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