Defect record Format

2019/06/17

File Format: XML
Example:

```
<?xml version="1.0" encoding="utf-8"?>
<defect_record version="1.0">
  <index>125</index>
  <model>Iphone6 plus Gold</model>
  <time>2019/06/10 12:08:56</time>
  <station name="BACK">
    <surface name="B">
      <sensor name="cover" type="smooth_surface_sensor">
             <parameter>
             ...
             </parameter>
        <defect>
          <item class="defect">
              <type>Nick</type>
                <defect_item>1,2</defect_item>
            <length>2.26943</length>
            <width>1.04098</width>
            <area_mm>0.158429</area_mm>
            <area_pixel>816</area_pixel>
            <contrast>32</contrast>
            <location>
              <point>3604.2,2029.79</point>
              <point>3661.51,1877.33</point>
              <point>3591.58,1851.05</point>
              <point>3534.27,2003.5</point>
            </location>
          </item>
          <item type="measurement">
            <type>Discoloration</type>
            <region>Rear_Cam</region>
            <value>6.69377</value>
          </item>
          <item type="fail">
            <type>Fail</type>
          </item>
        </defect>
      </sensor>
    </surface>
</station>
</defect_record>
```

Description:

1. defect_record: root node, the attribute "version" is the version of format.
2. index: The index of record.
3. model: The model name.
4. time: The inspection time.
5. station: The "name" attribute is this station's name.

6. surface: The "name" attribute is this surface's name (AA, A, B, C).
7. sensor: it has the following attributes:
    - name: this sensor's name.
    - type: this sensor's type.
8. parameter: parameters of sensor (This document does not describe its format)
9. defect: this field contains all the defects of current sensor
10. item: the record of one defect, the "class" parameter describes its defect type:
    - defect: it is a normal defect.
    - measurement: it is generated by the measurement, for example, difference of brightness between two regions.
    - fail: undefined defect, usually it is caused by alignment.
11. type: (Scratch, Nick, Crack, Discoloration, Fail) the defect type
12. defect_item: the list of defect items which detect this defect, for example:
    <defect_item>1</defect_item>: the first defect item detects this defect.
    <defect_item>1,2</defect_item>: the first and second defect items detect this defect.
13. length: the length of defect (mm)
14. widtrh: the width of defect (mm)
15. area_mm: the area of defect (mm^2)
16. area_pixel: the area of defect (pixel)
17. contrast: the contrast between the defect and background.
18. location: the polygon which contains the defect
19. point: the vetex of polygon
20. region: the region of discoloration
21. value: the value of measurement, for example, difference of brightness