Adding more than 22 CustomItems on Form cause S60 3rd Edition FP2 devices to hang (Known Issue)

This known issue was originally created by **Schoenke** and has been verified by Nokia Developer.

Description

If you add more than 22 `CustomItems` on a Form, the MIDlet will hang up when calling `Display.setCurrent()` or `Display.setCurrentItem()`. This means that the Form will not be displayed.

In the debugger you can see that one thread hangs in `Form._setCurrentItem()` and another one in `CustomItemTest.handleSizeChanged()`.

How to reproduce

See the following code snippet. This code works fine in Series 40 and S60 3rd Edition, FP1 emulators; however, start-up in the latter ones is very slow.

For a cross check, comment out approximately 10 `append()` statements and rerun the MIDlet. This way it works.

```
package main;

import javax.microedition.lcdui.Display;
import javax.microedition.midlet.MIDlet;

public class MidletTest extends MIDlet
{

   public void startApp() {
     FormTest frmTest = new FormTest(Display.getDisplay(this));
     frmTest.open(1);
   }

   public void destroyApp(boolean b) {
   }

   /**
    * Pausing is not supported in NOKIA's Series 40 and
    * S60 MIDP implementations.
    */
   public void pauseApp() {
   }

   public void quit() {
     notifyDestroyed();
   }
}
```

The Form:

```
package main;

import javax.microedition.lcdui.Display;
import javax.microedition.lcdui.Form;

import main.CustomItemTest;
```


(C) Copyright Nokia 2014. All rights reserved.

```
public class FormTest extends Form {

  private final Display display;

  private final CustomItemTest item00;
  private final CustomItemTest item01;
  private final CustomItemTest item02;
  private final CustomItemTest item03;
  private final CustomItemTest item04;
  private final CustomItemTest item05;
  private final CustomItemTest item06;
  private final CustomItemTest item07;
  private final CustomItemTest item08;
  private final CustomItemTest item09;
  private final CustomItemTest item10;
  private final CustomItemTest item11;
  private final CustomItemTest item12;
  private final CustomItemTest item13;
  private final CustomItemTest item14;
  private final CustomItemTest item15;
  private final CustomItemTest item16;
  private final CustomItemTest item17;
  private final CustomItemTest item18;
  private final CustomItemTest item19;
  private final CustomItemTest item20;
  private final CustomItemTest item21;
  private final CustomItemTest item22;
  private final CustomItemTest item23;
  private final CustomItemTest item24;
  private final CustomItemTest item25;
  private final CustomItemTest item26;
  private final CustomItemTest item27;
  private final CustomItemTest item28;
  private final CustomItemTest item29;

  public FormTest(Display pDisplay) {
    super("test screen");

    this.display = pDisplay;

    this.item00 = new CustomItemTest();
    this.item01 = new CustomItemTest();
    this.item02 = new CustomItemTest();
    this.item03 = new CustomItemTest();
    this.item04 = new CustomItemTest();
    this.item05 = new CustomItemTest();
    this.item06 = new CustomItemTest();
    this.item07 = new CustomItemTest();
    this.item08 = new CustomItemTest();
    this.item09 = new CustomItemTest();
    this.item10 = new CustomItemTest();
    this.item11 = new CustomItemTest();
    this.item12 = new CustomItemTest();
    this.item13 = new CustomItemTest();
    this.item14 = new CustomItemTest();
    this.item15 = new CustomItemTest();
```


(C) Copyright Nokia 2014. All rights reserved.

```
      this.item16 = new CustomItemTest();
      this.item17 = new CustomItemTest();
      this.item18 = new CustomItemTest();
      this.item19 = new CustomItemTest();
      this.item20 = new CustomItemTest();
      this.item21 = new CustomItemTest();
      this.item22 = new CustomItemTest();
      this.item23 = new CustomItemTest();
      this.item24 = new CustomItemTest();
      this.item25 = new CustomItemTest();
      this.item26 = new CustomItemTest();
      this.item27 = new CustomItemTest();
      this.item28 = new CustomItemTest();
      this.item29 = new CustomItemTest();

      append(this.item00);
      append(this.item01);
      append(this.item02);
      append(this.item03);
      append(this.item04);
      append(this.item05);
      append(this.item06);
      append(this.item07);
      append(this.item08);
      append(this.item09);
      append(this.item10);
      append(this.item11);
      append(this.item12);
      append(this.item13);
      append(this.item14);
      append(this.item15);
      append(this.item16);
      append(this.item17);
      append(this.item18);
      append(this.item19);

      append(this.item20);
      append(this.item21);
      append(this.item22);
      append(this.item23);
      append(this.item24);
      append(this.item25);
      append(this.item26);
      append(this.item27);
      append(this.item28);
      append(this.item29);
      }

    public void open(int pFocus) {
      display.setCurrentItem(get(pFocus));
    }
  }
```

The CustomItem:

```
  package main;
```


(C) Copyright Nokia 2014. All rights reserved.

```
import javax.microedition.lcdui.CustomItem;
import javax.microedition.lcdui.Graphics;

public class CustomItemTest extends CustomItem {

  public CustomItemTest() {
    super("");
  }

  protected void paint(Graphics pGraphics, int pWidth, int pHeight) {
    pGraphics.setColor(0x00ffffaa);
    pGraphics.fillRect(1, 1, pWidth - 2, pHeight - 2);
    pGraphics.setColor(0x00000000);
    pGraphics.drawString("TEST", 0, 0, Graphics.TOP | Graphics.LEFT);
  }

  protected int getMinContentHeight() {
    return 20;
  }

  protected int getMinContentWidth() {
    return 40;
  }

  protected int getPrefContentHeight(int arg0) {
    return 20;
  }

  protected int getPrefContentWidth(int arg0) {
    return 40;
  }
}
```

Solution

This issue is expected to be fixed in future software versions starting from S60 5th Edition.

(C) Copyright Nokia 2014. All rights reserved.