Checking network strength in Java ME

This code snippet demonstrates how to retrieve the current network strength.

Overview

The code example retrieves the system property `com.nokia.mid.networkavailability`.

If a network is available, the property will contain the string `available`. After that, the application reads the network strength from the `com.nokia.mid.networksignal` property and displays it.

Note that in Series 40 platform only signed MIDlets under operator domain can retrieve this information.

Source file: NetworkStrength.java

```
import javax.microedition.lcdui.Command;
import javax.microedition.lcdui.CommandListener;
import javax.microedition.lcdui.Display;
import javax.microedition.lcdui.Displayable;
import javax.microedition.lcdui.Form;
import javax.microedition.lcdui.StringItem;
import javax.microedition.midlet.MIDlet;


public class NetworkStrength extends MIDlet implements CommandListener{

    private Display display;
    private Form form;
    // Commands.
    private Command exitCommand;
    private Command refreshCommand;

    // Output fields.
    private StringItem strength;
    private StringItem availability;


    /**
     * Constructor. Constructs the object and initializes displayables.
     */
    public NetworkStrength() {
        form = new Form("Network strength.");

        exitCommand = new Command("Exit", Command.EXIT, 2);
        refreshCommand = new Command("Refresh", Command.OK, 1);

        availability = new StringItem("Network status:", "");
        strength = new StringItem("Network signal strength:", "\n --- ");

        form.append(availability);
        form.append(strength);

        form.addCommand(exitCommand);
        form.addCommand(refreshCommand);
        form.setCommandListener(this);

        display = Display.getDisplay(this);
        display.setCurrent(form);

        checkNetworkStatus();
    }

    /**
     * From MIDlet.
     * Called when the MIDlet is started.
     */
    public void startApp() {
        // No implementation required.
    }

    /**
     * From MIDlet.
     * Called to signal the MIDlet to enter the Paused state.
     */
    public void pauseApp() {
        // No implementation required.
    }

    /**
     * From MIDlet.
     * Called to signal the MIDlet to terminate.
     * @param unconditional whether the MIDlet has to be unconditionally
     * terminated
     */
    public void destroyApp(boolean unconditional) {
        // No implementation required
    }

    /**
     * From CommandListener.
     * Called by the system to indicate that a command has been invoked on a
     * particular displayable.
     * @param cmd the command that was invoked
     * @param displayable the displayable where the command was invoked
     */
    public void commandAction(Command c, Displayable d) {
        if (c == refreshCommand) {
            checkNetworkStatus();
        } else if (c == exitCommand) {
```


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```
        notifyDestroyed();
        }
    }

    /**
     * Called to check network availability and strength.
     */
    private void checkNetworkStatus() {
        String available =
                System.getProperty("com.nokia.mid.networkavailability");
        String signal = System.getProperty("com.nokia.mid.networksignal");
        //If network available.
        if  (available!=null && available.compareTo("available") == 0) {
            availability.setText("\n"+available+"\n");
            strength.setText(signal);
        } else {
            availability.setText("\n unavailable \n");
            strength.setLabel("Error:\n");
            strength.setText("Unable to retrieve current battery level.\n" +
                          "It's only available for signed midlets " +
                          "under operator domain.");

        }

    }
}
```

Postconditions

If a network is available, the MIDlet displays the current signal strength.

Supplementary material

The source file and executable application are available for download at Media:Checking network strength in J2ME.zip.

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