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UNITED STATES DEPARTMENT OF COMMERCE

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TITLE OF THE INVENTION (280 characters max)  CODE SIGNING SYSTEM AND METHOD  Direct all correspondence to:  CORRESPONDENCE ADDRESS  Place Customer Number Bar Code Label here  X Firm or Individual Name  David B. Cochran, Esq.  Address  Jones, Day, Reavis & Pogue  Address  North Point, 901 Lakeside Avenue  City  Cleveland  State  OH  ZIP 44114  Country  US  Telephone 216/586-3939 Fax 216/579-0212  ENCLOSED APPLICATION PARTS (check all that apply)  X Specification Number of Pages  17  X STRICK MANDAREX  Assignment  Power of Attorne	
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CODE SIGNING SYSTEM AND METHOD  Direct all correspondence to:  CORRESPONDENCE ADDRESS  Customer Number  Customer Number  David B. Cochran, Esq.  Individual Name  Address  Jones, Day, Reavis & Pogue  Address  North Point, 901 Lakeside Avenue  City  Cleveland  State  OH  ZIP  44114  Country  US  Telephone 216/586-3939 Fax  216/579-0212  ENCLOSED APPLICATION PARTS (check all that apply)  X Specification Number of Pages  17  X SD(x)x Numbers  Power of Attorne  Provisional Appl	
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Application Data Sheet. See 37 CFR 1.76	<u>n.                                    </u>
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Respectfully submitted, Date 2/9/01	

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555255012198 Docket Number INVENTOR(S)/APPLICANT(S) Residence (City and either State or Foreign Country) Family or Surname Given Name (first and middle [if any]) 523A Rosemeadow Crescent Little Herb Waterloo, Ontario N2T 1Z9 CANADA Yach 254 Castlefield Ave. David Waterloo, Ontario N2K 2N1 CANADA

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Title:

Code Signing System and Method

Inventor(s):

Michael Brown, Herb Little, David Yach

5 Assignee:

**Research In Motion Limited** 

### BACKGROUND OF THE INVENTION

#### Field of the Invention

This invention relates to security protocols with dynamic library linking programs such as Java<sup>™</sup> programs. Specifically, this invention relates to assigning a digital signature to a program in order to use it on a mobile communications device.

### **Description of the Prior Art**

When an application program arrives at a mobile communications device such as the RIM Wireless Handheld 957™ or a multiple mode device incorporating both data and voice communications features, there is a need to control the access that the application has. For example, if such a device is to be exported, access to any strong cryptographic routines residing on the device must be restricted. Interfaces to a radio transmitter may be protected so that destructive applications are unable to flood a wireless network with transmission signals; similarly, interfaces to a database or file system may be protected so that destructive applications are unable to fill a device's storage space with unwanted data or alter existing data.

One scheme for protecting interfaces involves application software signing, commonly called code signing. In conventional code signing schemes, an application



20

program developer or author generates a signature indicating the identity of the author and appends the signature to the application. Upon the arrival of a signed application at a device such as described above, the signature is used to authenticate the author of the application. If the author is a trusted source, the application may be loaded and executed on the device.

Most known code signing schemes grant access to device or system resources for an application program based on authentication of the author of the application. However, there remains a need for a code signing scheme which provides for more selective resource access restriction, based on the particular application instead of solely upon author authentication.

## SUMMARY OF THE INVENTION

It is therefore an object of the invention to provide an improved coding signing system and method.

It is a related object of the invention to oversee the management and execution of Java and other dynamic library link-based applications arriving at a mobile communications device.

It is a further object of the invention to verify that any application has been digitally signed as having permission to carry out its intended functions.

A still further object of the invention is to prevent unacceptable applications from gaining access strong cryptographic routines and any other application programming interface (API) designated by the API author as "sensitive".

In the present invention, digital signatures are used to control access to

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