CLAIMS:

1. A system for activating SIMs, wherein the system comprises more SIMs than will be authorised for use on a mobile network, the system comprising:

a plurality of SIMs, each of said SIMs being configured to provide an authentication identifier,

wherein one or more said authentication identifiers is reused amongst said plurality of SIMs such that one of said plurality of SIMs may provide the same said authentication identifier as another of said plurality of SIMs wherein said authentication identifiers of said plurality of SIMs have values within a defined set of values; and

a SIM authorisation server, configured to receive a said authentication identifier from a SIM requesting activation, determine whether said authentication identifier has been used to activate a SIM and, in response to a successful activation, to provide a traffic identifier to said SIM requesting activation and wherein said traffic identifier is not within said defined set of values,

wherein said traffic identifier enables said SIM requesting activation to communicate traffic over said mobile network; and

wherein, in response to failure of said activation said SIM requesting activation is configured to provide a different authentication identifier to said SIM authorisation server from the defined set of values, wherein said different authentication identifier is generated based on at least the said authentication identifier previously transmitted to the SIM authorisation server.

2. A system as claimed in claim 1 wherein the said authentication identifier and said traffic identifier each comprise an IMSI.

3. A system as claimed in claim 1 or 2 wherein said SIM requesting activation is configured to request activation by initiating an authentication request with said mobile network using the said authentication identifier.

4. A system as claimed in any preceding claim wherein said different authentication identifier is generated by incrementing or decrementing, by a set amount, a least significant digit of the said authentication identifier previously transmitted to the SIM authorisation server.

5. A system as claimed in any preceding claim, wherein said different authentication identifier is generated by incrementing or decrementing, by an amount chosen at random, a least significant digit of the said authentication identifier previously transmitted to the SIM authorisation server.

6. A system as claimed in any preceding claim, wherein the said authentication identifier is assigned to a pool of authentication identifiers, said pool being one of a plurality of pools of authentication identifiers and each pool comprising a set of unique authentication identifiers, and further wherein said different authentication identifier is assigned to a further pool of the plurality of pools.

7. A system as claimed in claim 6 wherein the said authentication identifier comprises a pool identifier digit and a plurality of lower-order digits randomly assigned to the SIM requesting activation at manufacture, and said different authentication identifier is generated by incrementing or decrementing said pool identifier digit.

8. A system as claimed in claim 6, wherein each authentication identifier in pool of the plurality of pools of authentication identifiers is either a prime number or can be created based on a multiplication using a prime number.

9. A system as claimed in any preceding claim, wherein said different authentication identifier is generated based on a location of the SIM requesting activation.

10. A system as claimed in any preceding claim, wherein said different authentication identifier is generated based on a timestamp of a transmission of the said authentication identifier to the SIM authorisation server.

11. A system as claimed in any preceding claim wherein said SIM requesting activation is configured to determine whether, in response to failure of a request for activation by one of said plurality of SIMs, an identifier used for said request for activation was a said authentication identifier or said traffic identifier, and to provide a different authentication identifier when said identifier used for said request for activation was a said authentication identifier.

12. A system as claimed in any preceding claim wherein each of said SIM cards has an associated computer readable storage medium storing processor control code to generate a plurality of said authentication identifiers from within a defined set of values.

13. A SIM for use in a system for activating SIMs, wherein the system comprises more SIMs than will be authorised for use on a mobile network, the SIM having an associated computer readable storage medium storing processor control code to:

generate an authentication identifier for activation of the SIM, wherein said generated authentication identifier has a value from within a defined set of values;

send an activation request with said authentication identifier to a SIM authorisation server in the mobile network;

update said authentication identifier with a traffic identifier received from a SIM authorisation server after successful activation of the SIM; and

in response to a failed activation of the SIM, generate a different authentication identifier from the defined set of values, wherein the different authentication identifier is generated based on the authentication identifier previously sent to the SIM authorisation server, and provide the different authentication identifier to said SIM authorisation server.

14. A SIM as claimed in claim 13 wherein said authentication identifier and said traffic identifier each comprise an IMSI.

15. A connected device including a SIM as claimed in claim 13 or 14.

16. A SIM authorisation server for use a system for activating SIMs, wherein the system comprises more SIMs than will be authorised for use on a mobile network, the SIM authorisation server comprising a computer readable storage medium storing processor control code to receive a first SIM identifier from a SIM requesting activation and, in response, provide a new SIM identifier to said SIM requesting activation,

wherein said first SIM identifier is from a set of first SIM identifiers smaller than a number of SIMs that may request activation such that two of said SIMs requesting activation may provide the same said first SIM identifier,

wherein said new SIM identifier is not within said set of possible first SIM identifiers, and

wherein said new SIM identifier is authenticatable by the mobile network to enable said SIM requesting activation to communicate traffic over a mobile network.

17. A method of activating a connected device such that the device is able to communicate traffic over a mobile network, the method comprising:

using a device with a SIM, wherein said SIM is configured to provide an authentication identifier selected from a set of possible authentication identifiers;

sending an activation request with said authentication identifier from said device to a SIM authorisation server in the mobile network;

receiving a response to said activation request from the SIM authorisation server;

when said response includes a traffic identifier in response to a successful activation, activating said device such that the device is able to communicate traffic over a mobile network, wherein said activating comprises updating said SIM with said traffic identifier, wherein said traffic identifier is not within said set of possible authentication identifiers; and

choosing a different authentication identifier from said set of possible authentication identifiers if said activating of said device has not taken place, wherein the different said authentication identifier is generated based on the authentication identifier previously transmitted to the SIM authorisation server, and providing the different authentication identifier to the SIM authorisation server.

18. A method as claimed in claim 17 wherein said authentication identifier and said traffic identifier each comprise an IMSI.

19. A method as claimed in claim 17 or 18, for activating a plurality of connected devices, wherein there are more of said connected devices than available authentication identifiers, the method comprising:

using a plurality of said connected devices each with a respective said SIM;

activating one of said connected devices by receiving said new SIM identifier;

detecting when an authentication identifier of a subsequent connected device requesting activation conflicts with the authentication identifier of a previously activated connected device; and

resolving the detected conflict by determining a different authentication identifier for said subsequent connected device.

20. A computer program product comprising computer program code embodied on a non-transient computer-readable medium and configured so as when executed on a device to implement the method of any one of claims 17 to 19.