

WHAT IS CLAIMED IS:

1. A security information interaction system based on the thin terminal mode, said security information interaction system based on the thin terminal mode comprising:

5 a security information interaction terminal for receiving a security information interaction request from a user, and transferring said security information interaction request to an access server, and also for establishing a communication link with the application server providing the target application service based on a security information interaction request response transferred back from said access server, and completing the subsequent security information
10 interaction procedure based on said communication link, wherein said security information interaction request including the information indicating the target application service;

an access server for querying the address information of the application server providing said target application service based on the received security information interaction request, and sending an application service request constructed according to said security information
15 interaction request to the application server providing said target application service based on the queried address information, and also for constructing said security information interaction request response based on the application service address in the application service request response from said application server providing said target application service, and transferring said security information interaction request response back to said security information
20 interaction terminal; and

at least one application server, each of which for constructing said application service request response based on the received application service request, transferring said application service request response to said access server, and completing the subsequent security information interaction procedure based on the communication link with said security
25 information interaction terminal established subsequently, wherein said application service request response including the application service address associated with said target application service;

~~2. The security information interaction system based on the thin terminal mode as
30 claimed in claim 1, characterized in that, wherein said security information interaction terminal comprises a user interface module for receiving the security information interaction request from the user and transferring said security information interaction request to said access server, said security information interaction request including the application service parameters and the application service provider parameters selected by the user based on an application service parameter table and an application service provider parameter table;~~

~~3. The security information interaction system based on the thin terminal mode as
35 claimed in claim 2, characterized in that, wherein said user interface module is also used for logging into said access server based on a user instruction, and acquiring said application service parameter table and said application service provider parameter table from said access server;~~

~~4. The security information interaction system based on the thin terminal mode as
40 claimed in claim 3, characterized in that, wherein each record in said application service parameter table is composed of an application service identifier field, an application service name field and an application service description field, wherein said application service name field is used for storing the name of the application service corresponding to the record, said~~

application service identifier field is used for storing the unique application service identifier of the application service, and said application service description field is used for storing the description about the application service;

5 ~~5. The security information interaction system based on the thin terminal mode as~~
~~claimed in claim 4, characterized in that, wherein~~ each record in said application service
provider parameter table is composed of an application service provider identifier field and an
application service provider name field, wherein said application service provider name field is
used for storing the name of the application service provider corresponding to the record, and
said application service provider identifier field is used for storing the unique application
10 service provider identifier of the application service provider;

6. ~~The security information interaction system based on the thin terminal mode as~~
~~claimed in claim 5, characterized in that, wherein~~ based on reading the contents in said
application service description field of each record shown in said application service parameter
table, user selects the application service corresponding to the record by means of choosing the
15 name of the application service in the name field of one of the records;

7. ~~The security information interaction system based on the thin terminal mode as~~
~~claimed in claim 6, characterized in that, wherein~~ user selects the application service provider
corresponding to the record by means of choosing the name of the application service provider
in the name field of one record in said application service provider parameter table;

20 8. ~~The security information interaction system based on the thin terminal mode as~~
~~claimed in claim 7, characterized in that, wherein~~ said application service parameter is the
application service identifier of the application service selected by the user;

9. ~~The security information interaction system based on the thin terminal mode as~~
~~claimed in claim 8, characterized in that, wherein~~ said application service provider parameter is
25 the application service provider identifier of the application service provider selected by the
user;

10. ~~The security information interaction system based on the thin terminal mode as~~
~~claimed in claim 9, characterized in that, wherein~~ said access server further comprises:

30 a main controller for receiving and analyzing said security information interaction
request from said security information interaction terminal, constructing a query
instruction based on the analyzed application service parameter and the application
service provider parameter, and transferring said query instruction to an application
service query module, and also for executing the subsequent processing based on the
query result transferred back from said application service query module;

35 an application service query module for querying an application service information
table based on the application service parameter and the application service provider
parameter in said query instruction, and transferring the query result back to said main
controller;

40 an information table storage module for storing said application service information
table;

an parameter table storage module for storing said application service parameter
table and said application service provider parameter table, and updating said application
service parameter table and said application service provider parameter table based on the
received parameter table configuration instruction; and

a configuration module for receiving an information table configuration instruction and/or the parameter table configuration instruction from the user, and updating said application service information table, and/or said application service parameter table, and/or said application service provider parameter table based on said information table configuration instructions, and/or said parameter table configuration instruction.

142. The security information interaction system based on the thin terminal mode as claimed in claim 141, characterized in that, said parameter table storage module is also used for controlling the display attributes of each record in said application service parameter table and said application service provider parameter table based on the received parameter table configuration instruction.

143. The security information interaction system based on the thin terminal mode as claimed in claim 142, characterized in that, said main controller is also used for providing said application service parameter table and said application service provider parameter table to said user interface module based on said login of said user interface module.

144. The security information interaction system based on the thin terminal mode as claimed in claim 143, characterized in that, each record in said application service information table is composed of the application service identifier field, the application service provider identifier field and an application server address information field, wherein said application service identifier field is used for storing the unique application service identifier of the application service corresponding to the record, said application service provider identifier field is used for storing the unique application service provider identifier of the application service provider providing the application service, and said application server address information field is used for storing the address information of the application server providing the application service.

145. The security information interaction system based on the thin terminal mode as claimed in claim 144, characterized in that, the same application service has the same application service identifier both in said application service parameter table and said application service information table, and the same application service provider has the same application service provider identifier both in said application service provider parameter table and said application service information table, and the application service identifier of any record in said application service information table has to exist in said application service parameter table, whereas the application service provider identifier of any record in said application service information table has to exist in said application service provider parameter table.

156. The security information interaction system based on the thin terminal mode as claimed in claim 145, characterized in that, when the record matching with both said application service parameter and said application service provider parameter is found out from said application service information table, the query result returned back to said main controller by said application service query module indicates "matching operation is successful ", and said query result includes the address information of the application server in the matched record.

167. The security information interaction system based on the thin terminal mode as claimed in claim 156, characterized in that, when the record matching with both said application service parameter and said application service provider parameter is found out from

said application service information table, the query result returned back to said main controller by said application service query module indicates "matching operation is successful ", and said query result includes the address information of the application server in the matched record.

5 | 178. The security information interaction system based on the thin terminal mode as claimed in claim 167, characterized in that, when only the record which matches with said application service parameter but does not match with said application service provider parameter is found out from said application service information table, the query result returned back to said main controller by said application service query module indicates
10 | "matching operation is not successful ", and said query result includes the application service provider identifier in the record which matches with said application service parameter but does not match with said application service provider parameter.

15 | 189. The security information interaction system based on the thin terminal mode as claimed in claim 178, characterized in that, said main controller is further used for sending the application service request constructed according to said security information interaction request to the application server directed by the address information of the application server in the matched record when the received query result indicates "matching operation is successful".

20 | 1910. The security information interaction system based on the thin terminal mode as claimed in claim 189, characterized in that, said main controller is further used for constructing said security information interaction request response based on the application service address in the application service request response from the application server directed by said address information, and transferring said security information interaction request response back to said user interface module, wherein said security information interaction
25 | request response including said application service address and a flag indicating "bridging".

30 | 2011. The security information interaction system based on the thin terminal mode as claimed in claim 1910, characterized in that, said main controller is further used for constructing said security information interaction request response based on said query result when the received query result indicates "matching operation is not successful", and transferring said security information interaction request response back to said user interface module, wherein said security information interaction request response including the application service provider identifier in the record which matches with said application service parameter but does not match with said application service provider parameter.

35 | 2112. The security information interaction system based on the thin terminal mode as claimed in claim 2011, characterized in that, said user interface module is also used for receiving and analyzing said security information interaction request response, establishing the communication link with the application server providing said target application service based on the application service address included in said security information interaction request response when said security information interaction request response includes the flag
40 | indicating "bridging", and completing the subsequent security information interaction procedure based on said communication link.

2213. The security information interaction system based on the thin terminal mode as claimed in claim 2112, characterized in that, said user interface module is also used for displaying the name of the application service provider corresponding to said application

service provider identifier based on said application service provider identifier included in said security information interaction request response when the received security information interaction request response does not include the flag indicating "bridging", and asking the user whether to select other application service providers and then restarting or ending the security information interaction procedure based on the selection of the user.

2314. The security information interaction system based on the thin terminal mode as claimed in claim 2213, characterized in that, said configuration module is also used for transferring the parameter table configuration instruction from the user to said parameter table storage module.

2415. The security information interaction system based on the thin terminal mode as claimed in claim 2314, characterized in that, said security information interaction terminal is a mobile terminal.

2516. The security information interaction system based on the thin terminal mode as claimed in claim 2415, characterized in that, said user interface module is a web browser.

2617. The security information interaction system based on the thin terminal mode as claimed in claim 2516, characterized in that, both the address information of the application server and the application service address are the address of web sites.

2718. The security information interaction system based on the thin terminal mode as claimed in claim 2617, characterized in that, said security information interaction procedure is a mobile payment procedure.

2819. The security information interaction system based on the thin terminal mode as claimed in claim 2718, characterized in that, an SSL encryption transmission channel is established between said security information interaction terminal and said access server, and the information interaction between said security information interaction terminal and said access server is performed using said SSL encryption transmission channel.

2920. The security information interaction system based on the thin terminal mode as claimed in claim 2819, characterized in that, a bidirectional authentication mechanism in the PKI certificate authentication system is employed between said security information interaction terminal and said access server.

3021. The security information interaction system based on the thin terminal mode as claimed in claim 2920, characterized in that, each of said at least one application server further comprises:

a request processing module for constructing said application service request response based on the received application service request, and transferring said application service request response to said access server, wherein said application service request response including the application service address associated with said target application service; and

an application service executing module for completing the subsequent security information interaction procedure based on said communication link with said security information interaction terminal established subsequently.

~~31. A security information interaction terminal, said security information interaction terminal being used for receiving a security information interaction request from a user, and transferring said security information interaction request to the corresponding access server, and also for establishing a communication link with the application server providing the target application service based on a security information interaction request response transferred~~

back from said access server, and completing the subsequent security information interaction procedure based on said communication link, wherein said security information interaction request including the information indicating the target application service.

32. — An access server, said access server being used for querying the address information of the application server providing the target application service based on the security information interaction request received from the corresponding security information interaction terminal, and sending an application service request constructed according to said security information interaction request to the application server providing said target application service based on the queried address information, and also for constructing a security information interaction request response based on the application service address in the application service request response from said application server providing said target application service, and transferring said security information interaction request response back to said security information interaction terminal.

33. — An application server, said application server being used for constructing an application service request response based on the application service request received from an access server, transferring said application service request response to said access server, and completing the subsequent security information interaction procedure based on a communication link with the corresponding security information interaction terminal established subsequently, wherein said application service request response including the application service address associated with a target application service.

34. — A security information interaction method based on the thin terminal mode, said security information interaction method based on the thin terminal mode comprising the following steps:

(A1) a security information interaction terminal receiving a security information interaction request from a user, and transferring said security information interaction request to an access server, wherein said security information interaction request including the information indicating a target application service;

(A2) said access server querying the address information of the application server providing said target application service based on the received security information interaction request, and sending an application service request constructed according to said security information interaction request to the application server providing said target application service based on the queried address information;

(A3) said application server providing said target application service constructing an application service request response based on the received application service request, and transferring said application service request response to said access server, wherein said application service request response including the application service address associated with said target application service;

(A4) said access server constructing a security information interaction request response based on the application service address in the application service request response from said application server providing said target application service, and transferring said security information interaction request response back to said security information interaction terminal; and

(A5) said security information interaction terminal establishing a communication link with said application server providing said target application service based on said security

~~information interaction request response transferred back from said access server, and completing the subsequent security information interaction procedure based on said communication link.~~

WHAT IS CLAIMED IS:

1. A security information interaction system based on the thin terminal mode, said security information interaction system based on the thin terminal mode comprising:

5 a security information interaction terminal for receiving a security information interaction request from a user, and transferring said security information interaction request to an access server, and also for establishing a communication link with the application server providing the target application service based on a security information interaction request response transferred back from said access server, and completing the subsequent security information
10 interaction procedure based on said communication link, wherein said security information interaction request including the information indicating the target application service;

an access server for querying the address information of the application server providing said target application service based on the received security information interaction request, and sending an application service request constructed according to said security information
15 interaction request to the application server providing said target application service based on the queried address information, and also for constructing said security information interaction request response based on the application service address in the application service request response from said application server providing said target application service, and transferring said security information interaction request response back to said security information
20 interaction terminal; and

at least one application server, each of which for constructing said application service request response based on the received application service request, transferring said application service request response to said access server, and completing the subsequent security information interaction procedure based on the communication link with said security
25 information interaction terminal established subsequently, wherein said application service request response including the application service address associated with said target application service.

wherein said security information interaction terminal comprises a user interface module for receiving the security information interaction request from the user and transferring said
30 security information interaction request to said access server, said security information interaction request including the application service parameters and the application service provider parameters selected by the user based on an application service parameter table and an application service provider parameter table;

wherein said user interface module is also used for logging into said access server based
35 on a user instruction, and acquiring said application service parameter table and said application service provider parameter table from said access server;

wherein each record in said application service parameter table is composed of an application service identifier field, an application service name field and an application service description field, wherein said application service name field is used for storing the name of the
40 application service corresponding to the record, said application service identifier field is used for storing the unique application service identifier of the application service, and said application service description field is used for storing the description about the application service;

wherein each record in said application service provider parameter table is composed of

an application service provider identifier field and an application service provider name field, wherein said application service provider name field is used for storing the name of the application service provider corresponding to the record, and said application service provider identifier field is used for storing the unique application service provider identifier of the application service provider;

wherein based on reading the contents in said application service description field of each record shown in said application service parameter table, user selects the application service corresponding to the record by means of choosing the name of the application service in the name field of one of the records;

wherein user selects the application service provider corresponding to the record by means of choosing the name of the application service provider in the name field of one record in said application service provider parameter table;

wherein said application service parameter is the application service identifier of the application service selected by the user;

wherein said application service provider parameter is the application service provider identifier of the application service provider selected by the user;

wherein said access server further comprises:

a main controller for receiving and analyzing said security information interaction request from said security information interaction terminal, constructing a query instruction based on the analyzed application service parameter and the application service provider parameter, and transferring said query instruction to an application service query module, and also for executing the subsequent processing based on the query result transferred back from said application service query module;

an application service query module for querying an application service information table based on the application service parameter and the application service provider parameter in said query instruction, and transferring the query result back to said main controller;

an information table storage module for storing said application service information table;

an parameter table storage module for storing said application service parameter table and said application service provider parameter table, and updating said application service parameter table and said application service provider parameter table based on the received parameter table configuration instruction; and

a configuration module for receiving an information table configuration instruction and/or the parameter table configuration instruction from the user, and updating said application service information table, and/or said application service parameter table, and/or said application service provider parameter table based on said information table configuration instructions, and/or said parameter table configuration instruction.

2. The security information interaction system based on the thin terminal mode as claimed in claim 1, characterized in that, said parameter table storage module is also used for controlling the display attributes of each record in said application service parameter table and said application service provider parameter table based on the received parameter table configuration instruction.

3. The security information interaction system based on the thin terminal mode as claimed in claim 2, characterized in that, said main controller is also used for providing said application service parameter table and said application service provider parameter table to said user interface module based on said login of said user interface module.

4. The security information interaction system based on the thin terminal mode as claimed in claim 3, characterized in that, each record in said application service information table is composed of the application service identifier field, the application service provider identifier field and an application server address information field, wherein said application service identifier field is used for storing the unique application service identifier of the application service corresponding to the record, said application service provider identifier field is used for storing the unique application service provider identifier of the application service provider providing the application service, and said application server address information field is used for storing the address information of the application server providing the application service.

5. The security information interaction system based on the thin terminal mode as claimed in claim 4, characterized in that, the same application service has the same application service identifier both in said application service parameter table and said application service information table, and the same application service provider has the same application service provider identifier both in said application service provider parameter table and said application service information table, and the application service identifier of any record in said application service information table has to exist in said application service parameter table, whereas the application service provider identifier of any record in said application service information table has to exist in said application service provider parameter table.

6. The security information interaction system based on the thin terminal mode as claimed in claim 5, characterized in that, when the record matching with both said application service parameter and said application service provider parameter is found out from said application service information table, the query result returned back to said main controller by said application service query module indicates "matching operation is successful ", and said query result includes the address information of the application server in the matched record.

7. The security information interaction system based on the thin terminal mode as claimed in claim 6, characterized in that, when the record matching with both said application service parameter and said application service provider parameter is found out from said application service information table, the query result returned back to said main controller by said application service query module indicates "matching operation is successful ", and said query result includes the address information of the application server in the matched record.

8. The security information interaction system based on the thin terminal mode as claimed in claim 7, characterized in that, when only the record which matches with said application service parameter but does not match with said application service provider parameter is found out from said application service information table, the query result returned back to said main controller by said application service query module indicates "matching operation is not successful ", and said query result includes the application service provider identifier in the record which matches with said application service parameter but does not match with said application service provider parameter.

9. The security information interaction system based on the thin terminal mode as claimed in claim 8, characterized in that, said main controller is further used for sending the application service request constructed according to said security information interaction request to the application server directed by the address information of the application server in the matched record when the received query result indicates "matching operation is successful".

10. The security information interaction system based on the thin terminal mode as claimed in claim 9, characterized in that, said main controller is further used for constructing said security information interaction request response based on the application service address in the application service request response from the application server directed by said address information, and transferring said security information interaction request response back to said user interface module, wherein said security information interaction request response including said application service address and a flag indicating "bridging".

11. The security information interaction system based on the thin terminal mode as claimed in claim 10, characterized in that, said main controller is further used for constructing said security information interaction request response based on said query result when the received query result indicates "matching operation is not successful", and transferring said security information interaction request response back to said user interface module, wherein said security information interaction request response including the application service provider identifier in the record which matches with said application service parameter but does not match with said application service provider parameter.

12. The security information interaction system based on the thin terminal mode as claimed in claim 11, characterized in that, said user interface module is also used for receiving and analyzing said security information interaction request response, establishing the communication link with the application server providing said target application service based on the application service address included in said security information interaction request response when said security information interaction request response includes the flag indicating "bridging", and completing the subsequent security information interaction procedure based on said communication link.

13. The security information interaction system based on the thin terminal mode as claimed in claim 12, characterized in that, said user interface module is also used for displaying the name of the application service provider corresponding to said application service provider identifier based on said application service provider identifier included in said security information interaction request response when the received security information interaction request response does not include the flag indicating "bridging", and asking the user whether to select other application service providers and then restarting or ending the security information interaction procedure based on the selection of the user.

14. The security information interaction system based on the thin terminal mode as claimed in claim 13, characterized in that, said configuration module is also used for transferring the parameter table configuration instruction from the user to said parameter table storage module.

15. The security information interaction system based on the thin terminal mode as claimed in claim 14, characterized in that, said security information interaction terminal is a mobile terminal.

16. The security information interaction system based on the thin terminal mode as claimed in claim 15, characterized in that, said user interface module is a web browser.

17. The security information interaction system based on the thin terminal mode as claimed in claim 16, characterized in that, both the address information of the application
5 server and the application service address are the address of web sites.

18. The security information interaction system based on the thin terminal mode as claimed in claim 17, characterized in that, said security information interaction procedure is a mobile payment procedure.

19. The security information interaction system based on the thin terminal mode as
10 claimed in claim 18, characterized in that, an SSL encryption transmission channel is established between said security information interaction terminal and said access server, and the information interaction between said security information interaction terminal and said access server is performed using said SSL encryption transmission channel.

20. The security information interaction system based on the thin terminal mode as
15 claimed in claim 19, characterized in that, a bidirectional authentication mechanism in the PKI certificate authentication system is employed between said security information interaction terminal and said access server.

21. The security information interaction system based on the thin terminal mode as
20 claimed in claim 20, characterized in that, each of said at least one application server further comprises:

a request processing module for constructing said application service request response based on the received application service request, and transferring said application service request response to said access server, wherein said application service request response including the application service address associated with said target application service; and

25 an application service executing module for completing the subsequent security information interaction procedure based on said communication link with said security information interaction terminal established subsequently.