

WHAT IS CLAIMED IS:

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1 1. A method for managing access to a protected resource using network
2 messages, the method comprising performing, by a processor computer:
3 receiving an authorization request to access the protected resource, the
4 authorization request generated by an access device
5 assigning a request identifier to the authorization request;
6 sending the authorization request to a transport computer for authorization by
7 an authorization computer;
8 after sending the authorization request, receiving cancellation data;
9 storing the cancellation data in association with the request identifier;
10 in response to receiving the cancellation data, sending a reversal message to
11 the transport computer;
12 after sending the reversal message, generating a cancellation message using
13 the cancellation data; and
14 sending the cancellation message to the transport computer for reconciling the
15 authorization request and the reversal message.
- 1 2. The method of claim 1, wherein the processor computer receives the
2 cancellation data before the access device receives an authorization response message for
3 accessing the protected resource.
- 1 3. The method of claim 1, wherein the cancellation data includes a state
2 of the access device that causes a cancellation.
- 1 4. The method of claim 1, wherein the cancellation message includes a
2 type of cancellation performed and the request identifier associated with the authorization
3 request that was cancelled.
- 1 5. The method of claim 1, wherein the access device is connected to the
2 processor computer via a gateway computer, and wherein the gateway computer generates
3 the reversal message, and wherein the cancellation data is received by the processor computer
4 from the gateway computer.

- 1 6. The method of claim 1, further comprising:
2 generating additional cancellation messages for additional authorization
3 requests corresponding to additional access devices, each of the additional cancellation
4 messages having a respective request identifier.
- 5 7. The method of claim 6, further comprising:
6 aggregating the cancellation message and the additional cancellation messages
7 to form a batch message, and wherein the cancellation message is sent to the transport
8 computer in the batch message.
- 9 8. The method of claim 7, wherein the request identifiers are unique
10 within a specified time period corresponding to the batch message.
- 11 9. The method of claim 1, wherein the cancellation message includes the
12 request identifier.
- 1 10. The method of claim 1, further comprising:
2 generating a database record having a field that includes the request identifier;
3 and
4 responsive to receiving the cancellation data, storing the cancellation data in
5 the database record, thereby storing the cancellation data in association with the request
6 identifier.
- 1 11. The method of claim 10, wherein the cancellation data is received in
2 the reversal message that is received from the access device or a gateway computer, the
3 method further comprising:
4 determining the reversal message includes the cancellation data based on a
5 type indicator in the reversal message.
- 1 12. A server computer for managing access to a protected resource using
2 network messages, the server computer comprising:
3 one or more processors; and
4 a computer readable medium storing a plurality of instructions that, when
5 executed by the one or more processors, cause the one or more processors to perform a
6 method comprising:

7 receiving an authorization request to access the protected resource, the
8 authorization request generated by an access device
9 assigning a request identifier to the authorization request;
10 sending the authorization request to a transport computer for authorization
11 by an authorization computer;
12 after sending the authorization request, receiving cancellation data;
13 storing the cancellation data in association with the request identifier;
14 in response to receiving the cancellation data, sending a reversal message
15 to the transport computer;
16 after sending the reversal message, generating a cancellation message
17 using the cancellation data; and
18 sending the cancellation message to the transport computer for reconciling
19 the authorization request and the reversal message.

1 13. The server computer of claim 12, wherein the cancellation data
2 includes a state of the access device that causes a cancellation.

1 14. The server computer of claim 12, wherein the cancellation message
2 includes a type of cancellation performed and the request identifier associated with the
3 authorization request that was cancelled.

1 15. The server computer of claim 12, wherein the server computer is
2 connected to the access device via a gateway computer that is configured to generate the
3 reversal message that is received by the server computer.

1 16. The server computer of claim 12, wherein the method further
2 comprises:
3 generating additional cancellation messages for additional authorization
4 requests corresponding to additional access devices, each of the additional cancellation
5 messages having a respective request identifier.

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1 17. The server computer of claim 16, wherein the method further
2 comprises:

3 aggregating the cancellation message and the additional cancellation messages
4 to form a batch message, and wherein the cancellation message is sent to the transport
5 computer in the batch message.

1 18. The server computer of claim 12, wherein the cancellation message
2 includes the request identifier.

1 19. The server computer of claim 12, wherein the method further
2 comprises:
3 generating a database record having a field that includes the request identifier;
4 and
5 responsive to receiving the cancellation data, storing the cancellation data in
6 the database record, thereby storing the cancellation data in association with the request
7 identifier.

1 20. The server computer of claim 19, wherein the server computer is
2 configured to receive the reversal message from the access device or a gateway computer,
3 and wherein the method further comprises:
4 determining the reversal message includes the cancellation data based on a
5 type indicator in the reversal message.