

is ISO 8583: 1987. Likewise, when the first digit of the four-digit is 1, the version is ISO 8583: 1993 and when the first digit of the four-digit is 2, the version is ISO 8583: 2003.

[0056] Figure 7C illustrates the fields associated with second digit of the MTI. As shown, the second digit can take the values 0 to 9. As can be seen in Figure 7C, for the values 0 and 9, the MTI field is reserved for ISO. Likewise, Figure 7D illustrates the fields associated with third digit of the MTI. As can be seen in Figure 7D, for the values 8 and 9, the MTI field is reserved for ISO.

[0057] In some non-limiting embodiments or aspects, the merchant system (104) can include a unique identifier in the transaction message indicating presence of the m-OTP in the transaction message. In some non-limiting embodiments or aspects, the second digit among the four digit can indicate the presence of the m-OTP in the transaction message. For example, the value 0 in the second digit can be defined to indicate the m-OTP. In another example, the value 9 in the second digit can be defined to indicate the m-OTP.

[0058] In some non-limiting embodiments or aspects, the third digit among the four digit can indicate the presence of the m-OTP in the transaction message. For example, the value 8 in the third digit can be defined to indicate the m-OTP. In another example, the value 9 in the third digit can be defined to indicate the m-OTP.

[0059] In some non-limiting embodiments or aspects, for all values of the fourth digit, the field is defined. Hence, m-OTP may not be identified using the fourth digit. Figure 7E illustrates the fields associated with fourth digit of the MTI.

[0060] In some non-limiting embodiments or aspects, the unique identifier is the MTI four-digit code.

[0061] In some non-limiting embodiments or aspects, a bitmap is a field indicating which data elements may be present or not in the transaction message. The transaction message includes at least one bitmap, called the primary bitmap which indicates which of data elements 1 to 64 are present. A secondary bitmap may also be present as data element one, and the secondary bitmap indicates which of data elements 65 to 128 are present. Also, a third bitmap can be used to indicate the presence or absence of fields 129 to 192. In some non-limiting embodiments or aspects, the m-OTP can be accommodated either in first 1-64 bits of the data elements, or the 65 to 128 bits of the data elements. Accordingly, the primary bitmaps and secondary bitmaps can be updated to indicate the m-OTP in the transaction

without limitation, Apple Macintosh OS X, Unix, Unix-like system distributions (e.g., Berkeley Software Distribution (BSD), FreeBSD, NetBSD, OpenBSD, etc.), Linux distributions (e.g., Red Hat, Ubuntu, Kubuntu, etc.), IBM OS/2, Microsoft Windows (XP, Vista/7/8, 10 etc.), Apple iOS, Google Android, Blackberry OS, or the like.

[0090] In some embodiments, the computer system (900) may implement a web browser (908) stored program component. The web browser (908) may be a hypertext viewing application, such as Microsoft Internet Explorer, Google Chrome, Mozilla Firefox, Apple Safari, etc. Secure web browsing may be provided using Secure Hypertext Transport Protocol (HTTPS), Secure Sockets Layer (SSL), Transport Layer Security (TLS), etc. Web browsers (908) may utilize facilities such as AJAX, DHTML, Adobe Flash, JavaScript, Java, Application Programming Interfaces (APIs), etc. In some embodiments, the computer system (900) may implement a mail server stored program component. The mail server may be an Internet mail server such as Microsoft Exchange, or the like. The mail server may utilize facilities such as ASP, ActiveX, ANSI C++/C#, Microsoft .NET, CGI scripts, Java, JavaScript, PERL, PHP, Python, WebObjects, etc. The mail server may utilize communication protocols such as Internet Message Access Protocol (IMAP), Messaging Application Programming Interface (MAPI), Microsoft Exchange, Post Office Protocol (POP), Simple Mail Transfer Protocol (SMTP), or the like. In some embodiments, the computer system (900) may implement a mail client stored program component. The mail client may be a mail viewing application, such as Apple Mail, Microsoft Entourage, Microsoft Outlook, Mozilla Thunderbird, etc.

[0091] In some non-limiting embodiments or aspects, the computer system (900) is a directory server providing services for facilitating transactions between a merchant associated with an acquirer system, and an issuer system. In some non-limiting embodiments or aspects, the computer system (900) is connected to the entities comprising the merchant, acquirer system, and issuer system.

[0092] The terms “an embodiment”, “embodiment”, “embodiments”, “the embodiment”, “the embodiments”, “one or more embodiments”, “some embodiments”, “some non-limiting embodiments or aspects”, and “one embodiment” mean “one or more (but not all) embodiments of the disclosure”, unless expressly specified otherwise.

[0093] The terms “including”, “comprising”, “having” and variations thereof mean “including but not limited to”, unless expressly specified otherwise.

6. The method as claimed in claim 1, wherein the transaction information comprises at least one of, a primary account number of the cardholder, a processing code, a transaction amount, a transaction date and time, an acquirer system identification code, a currency code, an issuer system identification code, and mode of authentication comprising m-OTP, One Time Password (OTP) generated by the issuer system, a static password and biometric pattern information.

7. The method as claimed in claim 1, wherein the response message is generated based on authenticating the m-OTP and authorizing the transaction message.

8. The method as claimed in claim 1, wherein the response message is generated based on authenticating the m-OTP.

9. The method as claimed in claim 8, wherein the transaction message includes payer authentication request (PAREq) message.

10. A directory server for authorizing transactions, the server comprising:

one or more processors; and

one or more computer-readable media, communicatively coupled to the one or more processors, storing instructions, which upon execution causes the processor to:

receive a transaction message comprising transaction information for authorization, from an acquirer system, wherein the transaction message comprises at least a mobile-One Time Password (m-OTP), wherein the m-OTP was generated by an issuer mobile application configured in a cardholder's device and was submitted into a merchant system, wherein the merchant system provided the transaction message to the acquirer system for completing the transaction;

send the transaction message to an issuer system for authorization, wherein the transaction message is authorized after the m-OTP is retrieved from the transaction message by the issuer system for authenticating a cardholder associated with the issuer system;