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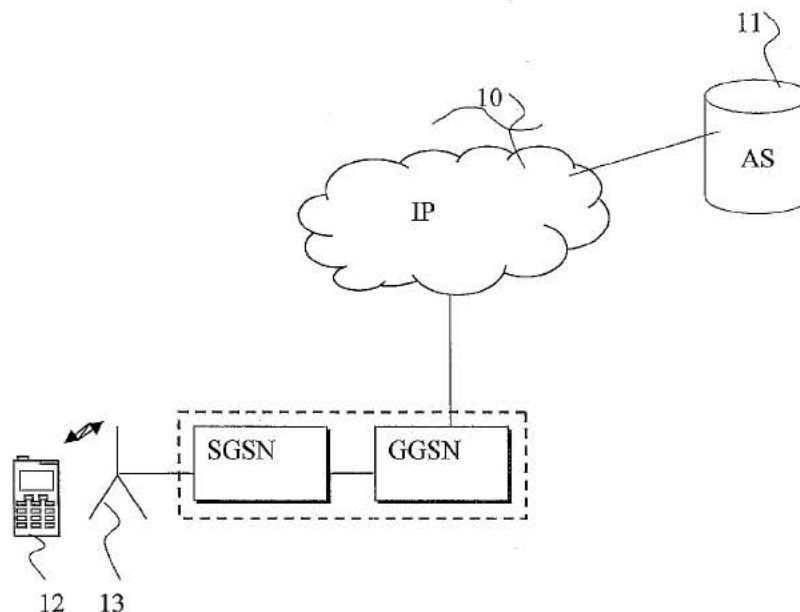
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(54) Title: CHARGING IN A COMMUNICATION SYSTEM



(57) Abstract: A method for charging in a communication system, the method comprising: initiating a data communication session between a user equipment and a network entity offering a digital content item; during the data communication session, generating by means of the user equipment a message for ordering the digital content item, sending the message to the network entity and, in response to the message received in the network entity, downloading the content item to the user equipment; and charging the digital content item using a predefined price of the message.

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## Charging in a communication system

### Field of invention

The invention relates to communication systems, and more particularly to charging in a communication system.

### 5 Background of invention

A communication system can be seen as a facility that enables communications between two or more entities such as user equipment and/or other nodes associated with the communication system. The communication session may comprise, for example, communication of voice, data, multimedia and so on. A user equipment may, for example, be provided with a two-way  
10 telephone call, multi-way conference call, electronic mail service or a data communication session. A user equipment may also be provided with a connection to an application server (AS), for example a service provider server, thus enabling use of services provided by the application server.

15 Examples of communication systems may include fixed communication systems, such as a public switched telephone network (PSTN), wireless communication systems, such as a public land mobile network (PLMN), and/or other communication networks such as an IP (Internet Protocol) and/or other packet switched data networks. Various communication systems may  
20 simultaneously be concerned in a connection.

The PLMNs are typically based on cellular technology. In cellular systems, a base transceiver station (BTS) or similar access entity serves wireless user equipment (UE), such as mobile stations (MS), via a wireless interface between these entities. Examples of mobile communication systems are the  
25 Global System for Mobile Communications (GSM), General Packet Radio Service (GPRS) and Universal Mobile Telecommunications System (UMTS). In addition to call functions, the mobile communication systems may support, for example, short message service (SMS), multimedia message service (MMS) and wireless applications protocol (WAP). For example, a user may access the  
30 mobile network by means of a personal computer (PC), personal digital assistant (PDA), mobile station (MS) and other user equipment (UE). The user equipment may be adapted for Internet Protocol (IP) communication to connect the network.

In communication systems, including mobile communication systems, selling various types of downloadable digital content directly to user equipment may be provided. Examples of such content items may include, but are not limited to logos, ring tones or wallpapers for the user equipment, games and applications and so on. The content may comprise data that can be interpreted and executed by the UE or presented (e.g. in an audio or visual manner) by the UE to a user thereof. The present scheme for providing selling of the content items is to use SMS pull codes for ordering. For example, an SMS order code "GET WPDEMO" may be sent to a particular number, such as an operator specific service number, e.g. 173222. This number could be a normal telephone number, but for convenience it is more normally a short-form number excluding an area code which has been set up by an operator of the network in which the UE is operating. The operator specific service number may belong to any service provider who has made an agreement with an operator. For instance in Finland, a service provider typically reserves exactly the same number from all the major operators. Therefore, it is easy for the end-user to order content, as the same number may always be used. Communications to that number are relayed to a server which may be run by the operator or by another service provider. The server may scan the received message including the order code and the identity of the ordering UE, and deliver the content item indicated by the order code to the ordering user equipment, for example, using SMS or WAP push methods. Such push methods may include, but are not limited to content object descriptor (COD), Java application descriptor (JAD) or the Open Mobile Alliance (OMA) download. The known SMS content item ordering uses a premium rate number. Thus, the ordering SMS may have a different price depending on the ordered content item. The charge for the content item may be included in the telephone bill issued by the operator of the home network of the ordering user or subscriber associated with the ordering UE. The content items and the order codes may be discovered in advertisements in web sites of service providers proposing the content items or in newspapers and magazines. In some applications, the proposed content items might be discovered using a WAP browser in a user equipment.

A WAP browser may be an application in a user equipment resembling for its overall essence any other browser, such as a XHTML (extensible hypertext markup language) browser or a HTTP (hypertext transfer protocol) browser. However, small size and data transfer technology in the mobile communication

systems may create problems and challenges in retrieving content from a service provider. The WAP protocol is tailored to providing browser content to devices with small displays.

5 It might be desired to be able to search, preview and order content items within a WAP, XHTML, HTTP or other browser session in the user equipment. Some tools for content preview and ordering are provided for example in the OMA digital rights management standards. However, no means exist for ordering and charging the content items in WAP and IP environments. In certain cases  
10 billing may be complicated, for example, if service provider is not an operator and wants to offer a service the clients of several operators. The arrangements for WAP and IP billing need typically to be created and agreed by service/content providers with each operator separately. This is time consuming and expensive, as often the service/content provider is a separate entity offering the content items to customers, who may subscribe to any  
15 operator.

US Patent Application US 2003/0163422 A1, filed on 4 February 2003 in the name of Suutarinen, relates to gaining access rights to previously downloaded digital record in a terminal.

20 There is therefore a need for providing a way of more readily charge for the content items sold through the data communication systems, such as the WAP and IP systems.

### Summary of invention

Embodiments of the invention aim to address one or several of the above problems or issues.

25 In accordance with an aspect of the invention, there is provided a method for charging in a communication system, the method comprising: initiating a data communication session between a user equipment and a network entity offering a digital content item; during the data communication session, generating by means of the user equipment a message for ordering the digital  
30 content item, sending the message to the network entity and, in response to the message received in the network entity, downloading the content item to the user equipment; and charging the digital content item using a predefined price of the message.



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