a reliable service for the above-mentioned notifications. When SMS is used, additional signaling for transmitting notifications is not required. SMS offers a bandwidth-friendly service for such simple notifications, this service also being simultaneously usable for ongoing connections or sessions in the GSM, GPRS, and UMTS systems. SMS is also available in second generation cellular phones (e.g. GSM). Therefore, a user may use essential features of the MMS service without requiring a third generation cellular phone (e.g. UMTS), which may be expensive.

According to another exemplary method of the present invention, the SMS short message is provided with a data portion, which has at least one of the following elements for establishing the message of the first message service: identification of the type of message of the first message service and/or content of the message of the first message service.

According to yet another exemplary method of the present invention, the length of the message of the first message service is specified as a further element for establishing the message of the first message service.

Still another exemplary method according to the present invention provides for at least a portion of the elements being accommodated in a user-data header of the SMS short message.

Yet another exemplary method according to the present invention provides for the user-data header being constructed in WCMP format, in which the message of the first message service is embedded.

According to still another exemplary method of the present invention, the SMS short message is provided with a header, which has an identifier for indicating the presence of a message of the first message service in the data portion.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. **1** shows the structure of an SMS short message of the first type A in GSM in accordance with a first exemplary method of the present invention.

FIG. **2** shows the structure of an SMS short message of the first type A in GSM, in accordance with a second exemplary method of the present invention.

FIG. **3** shows the structure of an SMS short message of the second type B in GSM, in accordance with a third exemplary method of the present invention.

FIG. **4** shows the principal structure of a first type A of SMS in GSM.

FIG. **5** shows the principal structure of a second type B of SMS short message in GSM.

DETAILED DESCRIPTION

In FIGS. **1** through **5**, identical reference symbols denote identical or functionally equivalent elements.

FIG. **1** shows the structure of an SMS short message of the first type A in GSM in accordance with a first exemplary method of the present invention.

In the first exemplary embodiment, the first message service is the MMS message service, the second message service is the SMS message service, and the dedicated, first group of messages of the MMS message service includes:

- dedicated MMS user messages (e.g. short text messages).
- notification of the presence of a message on the MMS server (notification).
- logging on to an MMS session (session establishment).
- receipt for this log-on (receipt).
- explicit request for a notification from the MMS relay (explicit notification query).
- confirmation of the reception of sent MM's in the relay (ACK/NACK_submission_1).
- confirmation of the success in sending MM's to other users (ACK/NACK_submission_2).
- acknowledgment of the success/failure in delivering an MM (ACK/NACK_delivery).
- triggering the automatic MM-download (pull-push).

FIG. **1** shows user-data header SM-DH of a type-A SMS short message for establishing a session with the MMS service.

In header SM-H, the presence of a user-data header SM-DH is indicated by flag TP-UDHI=1 in accordance with the standards GSM 03.40 V7.1.0 (11/1998) Technical Realization of the Short Message Service (SMS); Point-to-Point (PP) und 3G 23.040 V3.2.0 (10/1999) Technical Realization of the Short Message Service (SMS); and Point-to-Point (PP).

The formatting of user-data header SM-DH also conforms to the standards. User-data header SM-DH begins with user-data header length UHL followed by identification UHI of the first header element which, for example, may include the MMS session establishment header (hex. 22). This is then followed by length UHEL of the first header element which, for example, may include the necessary length for the MMS session establishment header information. Finally, the MMS session establishment header data fields UHD are provided, which may include, for example, the user ID and the user profile ID. Using the user ID, the user authenticates himself to his/her service provider, and using the profile ID, the user selects the service/user profile desired for this MMS session.

This information in the user-data header SM-DH may be succeeded by further user data header elements, e.g., for SMS concatenation, and, for example, beginning with identification UHI' of the second header element, the further user data header elements being constructed in a manner analogous to the first header element.

If only the MMS session establishment header (hex. 22 in the example) is present, the above-mentioned standard stipulates that the necessary SMS header/SMS user data header fields be encoded as follows:

SMS header: TP-UDHI=1 (user data header is present),

SMS user data header:

- UDHL=user data header length UHL.
- IEI=UHI=22 (user data header identification=hex. 22 for MMS session establishment).
- IEIDL=length of this user data header element UHEL.
- further information: user ID, profile ID.
- SMS data: empty, or additional SMS user data header or text message.

A unique user data header indicator UHI should be defined for each type of dedicated MMS message.

A mapping table may appear as follows:

TABLE 1

Exemplary Assignment of Information Element Identifiers (IEI)

Type of Dedicated MMS Message	IEI-Code
MMS user message	20
MMS notification	21
MMS session establishment	22
MMS receipt (of establishment)	23
MMS explicit notification-query	24
MMS ACK/NACK of submission (1)	25
MMS ACK/NACK of submission (2)	26