

# EXHIBIT 20

# 3G TS 23.040 V1.0.0 (1999-05)

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*Technical Specification*

**3rd Generation Partnership Project;  
Technical Specification Group Terminals;  
Technical realization of the Short Message Service (SMS);  
Point-to-Point (PP)  
(3G TS 23.040 version 1.0.0)**

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Reference

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Keywords

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## Foreword

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## Introduction

The Point-to-Point Short Message Service (SMS) provides a means of sending messages of limited size to and from GSM mobiles. The provision of SMS makes use of a Service Centre, which acts as a store and forward centre for short messages. Thus a GSM PLMN needs to support the transfer of short messages between Service Centres and mobiles.

Two different point-to-point services have been defined: mobile originated and mobile terminated. Mobile originated messages will be transported from an MS to a Service Centre. These may be destined for other mobile users, or for subscribers on a fixed network. Mobile terminated messages will be transported from a Service Centre to an MS. These may be input to the Service Centre by other mobile users (via a mobile originated short message) or by a variety of other sources, e.g. speech, telex, or facsimile.

The present document includes references to features which were introduced into the GSM Technical specifications after Release 96 of GSM Phase 2+.

The following table lists all features that were introduced after Release 96 and have impacted this specification: