

# USSD Gateway For 2G/3G Networks

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*Product brief*

## Overview

Modulo's Unstructured Supplementary Services Data (USSD) Gateway is a network element that connects between the mobile signaling network (SS7) and HTTP-based Value-Added Service Applications.

USSD applications can create new revenue streams for the mobile operator and its business clients. USSD can be used for real-time charging, content delivery, polling and surveys, banking services and more.

The USSD Gateway allows subscribers to send USSD messages in order to receive information and services from the operator. USSD messages are session-based, meaning they require an online continuous connection. This makes USSD messaging much faster than SMS messages (no Store-and-Forward). Our simple and easy RESTful HTTP API allows any web developer to easily create new USSD applications for the mobile network.

## Solution Features

- Full Compliance with both Phase 1 & Phase 2 USSD standards
- A simple and easy to use Restful HTTP API, which allows for the development of additional USSD services by any web developer.
- High speed message transfer
- Highly scalable architecture
- Allows easy creation of menu-based services

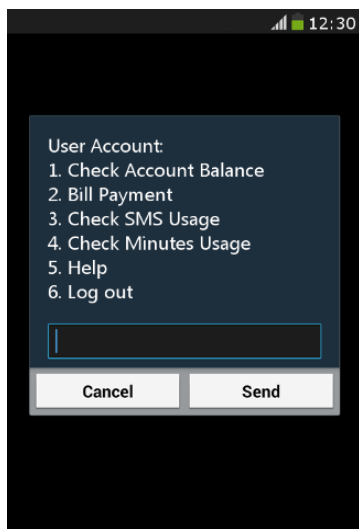
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## Use Cases

### CHECKING BALANCE AND PAYING PHONE BILL / RECHARGING PREPAID

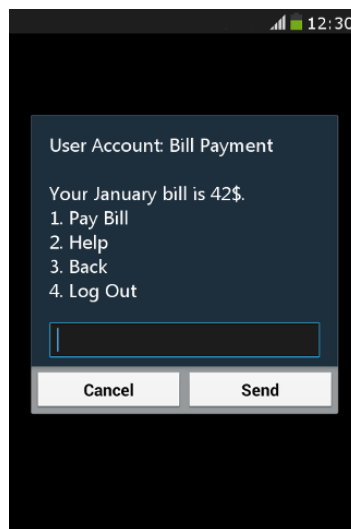


12:30

User Account:

- 1. Check Account Balance
- 2. Bill Payment
- 3. Check SMS Usage
- 4. Check Minutes Usage
- 5. Help
- 6. Log out

Cancel Send



12:30

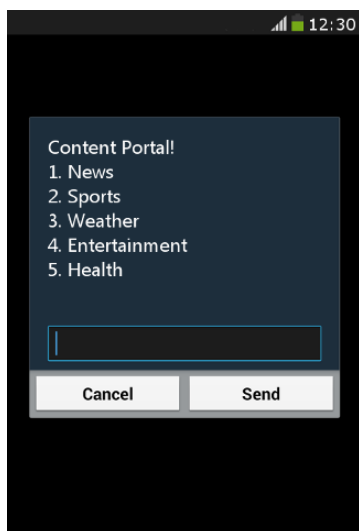
User Account: Bill Payment

Your January bill is 42\$.

- 1. Pay Bill
- 2. Help
- 3. Back
- 4. Log Out

Cancel Send

### CONTENT PORTAL



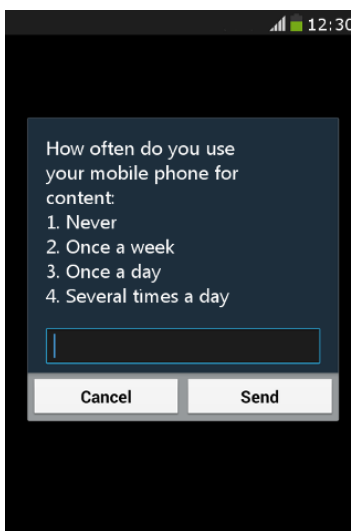
12:30

Content Portal!

- 1. News
- 2. Sports
- 3. Weather
- 4. Entertainment
- 5. Health

Cancel Send

### CONDUCTING POLLS



12:30

How often do you use your mobile phone for content:

- 1. Never
- 2. Once a week
- 3. Once a day
- 4. Several times a day

Cancel Send

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## ADDITIONAL USE CASES

- Changing Device Settings
- Polling
- Banking: Account Management
- Chatting
- Shopping
- And more...

The HTTP API feature in Modulo's USSD Gateway creates infinite possibilities for new USSD-based services to be developed.

## Functional Specifications

<b>Host</b>	General purpose server with Linux OS
<b>TDM Interface</b>	PCIe E1/T1/J1 adapter with MTP2 software
<b>IP Interface to Telephone Network</b>	M3UA, M2PA, M2UA over SCTP
<b>IP Interface to Local Area Network</b>	HTTP RESTful API SMPP v3.4 JMS API
<b>SS7 Links</b>	4 to 256 LSL
<b>SIGTRAN Associations</b>	Up to 1024
<b>E1 Interfaces</b>	4 to 16 per machine

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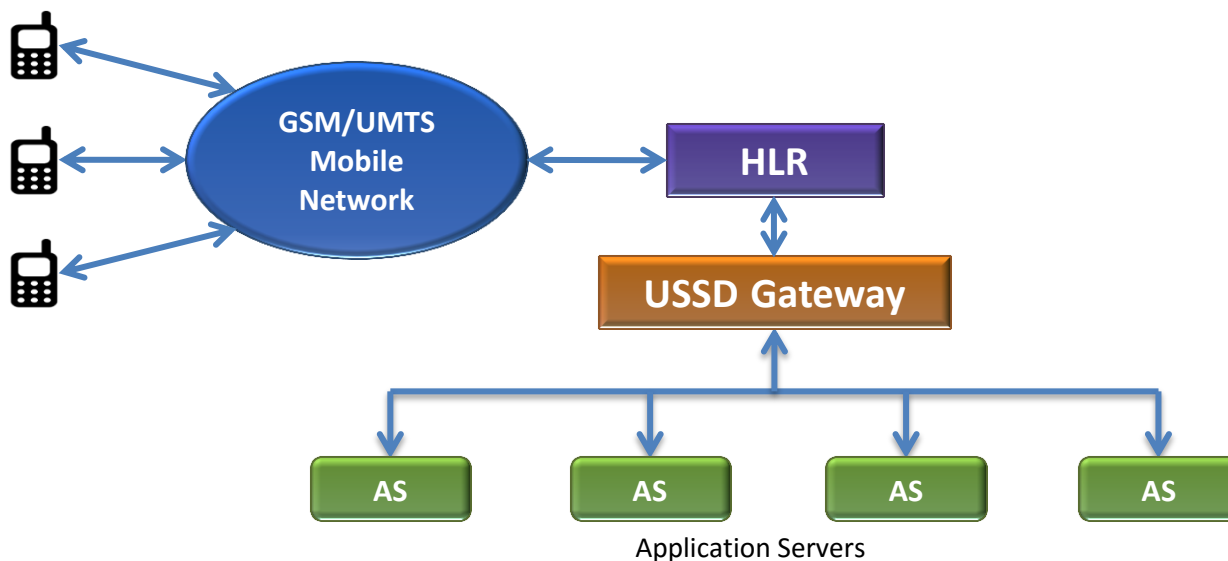


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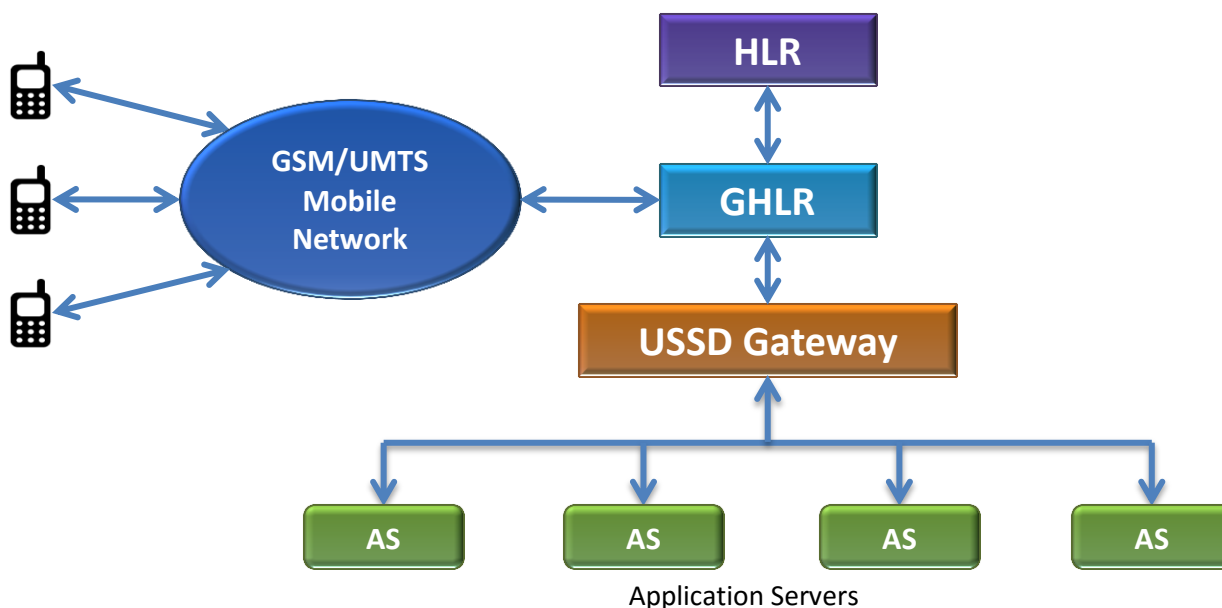
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## Architecture

### WHEN THE HLR CAN PASS USSD MESSAGES TO THE USSD GATEWAY



### WHEN THE HLR CANNOT PASS MESSAGES TO THE USSD GATEWAY



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## About Modulo C.S.

Modulo Communication Systems Ltd is a Telecom Solution Center. Modulo provides customers with the best and most cost-effective modern and converged telecom solutions in the market.

Modulo specializes in mobile-network technology, including specifications such as LTE, WebRTC, IMS, and Diameter, as well as legacy protocols such as 3G/UMTS, GSM, SIP, SS7 and Analog protocols. We provide services in design, development, integration, QA, maintenance and training for standard or customized telecom solutions, based on the most competitive off-the-shelf telecom products from market-leader suppliers.

We deliver a complete set of services for our products and solutions, including building blocks. Our services vary from simple reselling to fully-customized solutions through delivery, support, solution design, integration, development, maintenance, training and more.

## For more information

For more information about the product, contact our sales team at [www.modulo.co.il/contact](http://www.modulo.co.il/contact).