DSLxChange, Adding New Media Type to SIP Stack

For a comprehensive list of changes to this document, see the Revision History.

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Introduction

This document describes how a user can add new media type support to the SIP stack. This feature has been added to release 5.02.L03. Older releases will require Broadcom to rebuild the SIP stack binary.

Note that the new media type will be accepted by the SIP stack; however, further handling will have to be implemented by the user. When the media type is accepted, the SIP stack passes an appropriate event to the application, and the media body is provided for further processing. The following use-cases show some of the ways the new media type may be handled.

Use Cases

The following are customer use cases where a customer may need a new media type supported. For illustrative purpose, this new media type is referred to as “application/test.” In order to support this new media type, the customer must do the following:

- Add the new type to ESipMediaType and `g_ astSIPMEDIATYPE[]`.
- Call `RegisterSupportedPayload( eMEDIATYPE_APPLICATION_NEW_MEDIA )` in `configSce()`.

The following are the required source code changes:

```
==== userspace/private/apps/voice/sig/cctk22/cfgsrc/cctkExtCfg.cpp ====
883a884
>     {   "application",  "test"                  }, // eMEDIATYPE_APPLICATION_TEST
==== userspace/private/apps/voice/sig/cctk22/src/cfg/cfgEngine.cpp ====
2724a2725
>       pSceCfg->RegisterSupportedPayload( eMEDIATYPE_APPLICATION_TEST );
==== userspace/private/apps/voice/sig/m5tua/CustomConfig/PreSceCoreCfg.h ====
200a201
>     eMEDIATYPE_APPLICATION_TEST                 ,                   \
```

The following sections provide examples of how the new media type events can be handled.

Reception of INFO Requests

INFO requests are handled in `CeMain::EvUnhandledRequest()`. The handler processes the request, generates the eCEEVT_CALL_NET_INFO event, and sends that to the CCTK FSM handler. The following log would be seen when an INFO request with the new media type is received.

```
CeMain::EvUnhandledRequest - received 'application/test' media type
```

Reception of NOTIFY Requests

NOTIFY requests are handled in `CeMain::EvResourceStateUpdate()`. The handler processes the request, generates the eCEEVT_CALL_NET_NOTIFY event, and send that to the CCTK FSM handler. The following log would be seen when a NOTIFY request with the new media type is received.

```
CeMain::EvResourceStateUpdate - received 'application/test' media type
```

Reception of 200 OK Response for INVITE Request

The 200 OK responses to INVITE requests are handled in `CeMain::EvAnswered`(). The handler processes the request, generates the eCEEVT_CALL_NET_ANSWER event, and sends that to the CCTK FSM handler. The following log would be seen when a 200 OK response with the new media type is received.

```
CeMain::EvAnswered - received 'application/test' media type
```

Sending INFO Requests

INFO requests are completely user defined and the new media type can be used when configuring this SIP message. The following example is from `CeFsmCall::fsmDtmfInfoSnd`(). The user can replace eMEDIATYPE_AUDIO_TELEPHONE_EVENT with their new media type and modify the body appropriately.

```
MXD_GNS::CSipMessageBody *pBody =
                                        BRCM_NEW( MXD_GNS::CSipMessageBody );
…
                pCtTypeHdr->GetContentTypeMType() =
                      MXD_GNS::GetMediaMType(MXD_GNS::eMEDIATYPE_AUDIO_TELEPHONE_EVENT).CStr();
                pCtTypeHdr->GetContentTypeMSubType() =
                    MXD_GNS::GetMediaMSubType(MXD_GNS::eMEDIATYPE_AUDIO_TELEPHONE_EVENT).CStr();
…
            res = pBody->AddBody( pBlob, pCtTypeHdr );
```

Revision History

Revision	*Date*	*Change Description*
DSLxChange-AN1000-R	January 4, 2017	Initial release

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