Anhang III zu den Vorlesungsunterlagen:

Beispiele aus dem RFC 3261 der IETF (SIP-Standardisierung)

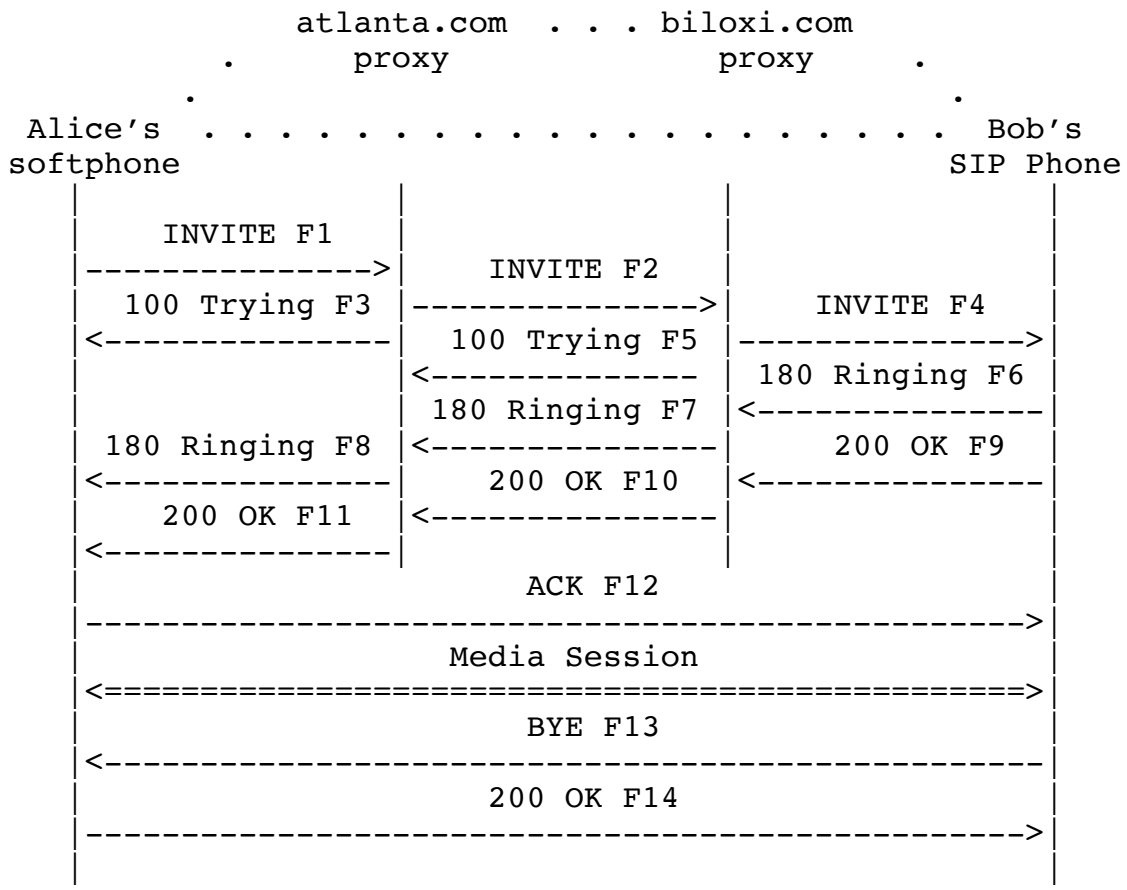

Figure 1: SIP session setup example with SIP trapezoid

```
INVITE sip:bob@biloxi.com SIP/2.0
Via: SIP/2.0/UDP pc33.atlanta.com;branch=z9hG4bK776asdhds
Max-Forwards: 70
To: Bob <sip:bob@biloxi.com>
From: Alice <sip:alice@atlanta.com>;tag=1928301774
Call-ID: a84b4c76e66710@pc33.atlanta.com
CSeq: 314159 INVITE
Contact: <sip:alice@pc33.atlanta.com>
Content-Type: application/sdp
Content-Length: 142

(Alice's SDP not shown)
```

The first line of the text-encoded message contains the method name (INVITE). The lines that follow are a list of header fields. This example contains a minimum required set. The header fields are briefly described below:

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8.1.1.3 From

The From header field indicates the logical identity of the initiator of the request, possibly the user's address-of-record. Like the To header field, it contains a URI and optionally a display name. It is used by SIP elements to determine which processing rules to apply to a request (for example, automatic call rejection). As such, it is very important that the From URI not contain IP addresses or the FQDN of the host on which the UA is running, since these are not logical names.

The From header field allows for a display name. A UAC SHOULD use the display name "Anonymous", along with a syntactically correct, but otherwise meaningless URI (like sip:thisis@anonymous.invalid), if the identity of the client is to remain hidden.

Usually, the value that populates the From header field in requests generated by a particular UA is pre-provisioned by the user or by the administrators of the user's local domain. If a particular UA is used by multiple users, it might have switchable profiles that include a URI corresponding to the identity of the profiled user. Recipients of requests can authenticate the originator of a request in order to ascertain that they are who their From header field claims they are (see Section 22 for more on authentication).

The From field MUST contain a new "tag" parameter, chosen by the UAC. See Section 19.3 for details on choosing a tag.

For further information on the From header field, see Section 20.20. Examples:

```
From: "Bob" <sips:bob@biloxi.com> ;tag=a48s
From: sip:+12125551212@phone2net.com;tag=887s
From: Anonymous <sip:c8oqz84zk7z@privacy.org>;tag=hyh8
```

8.1.1.4 Call-ID

The Call-ID header field acts as a unique identifier to group together a series of messages. It MUST be the same for all requests and responses sent by either UA in a dialog. It SHOULD be the same in each registration from a UA.

In a new request created by a UAC outside of any dialog, the Call-ID header field MUST be selected by the UAC as a globally unique identifier over space and time unless overridden by method-specific behavior. All SIP UAs must have a means to guarantee that the Call-ID header fields they produce will not be inadvertently generated by any other UA. Note that when requests are retried after certain

failure responses that solicit an amendment to a request (for example, a challenge for authentication), these retried requests are not considered new requests, and therefore do not need new Call-ID header fields; see Section 8.1.3.5.

Use of cryptographically random identifiers (RFC 1750 [12]) in the generation of Call-IDs is RECOMMENDED. Implementations MAY use the form "localid@host". Call-IDs are case-sensitive and are simply compared byte-by-byte.

> Using cryptographically random identifiers provides some protection against session hijacking and reduces the likelihood of unintentional Call-ID collisions.

No provisioning or human interface is required for the selection of the Call-ID header field value for a request.

For further information on the Call-ID header field, see Section 20.8.

Example:

```
Call-ID: f81d4fae-7dec-11d0-a765-00a0c91e6bf6@foo.bar.com
```

8.1.1.5 CSeq

The CSeq header field serves as a way to identify and order transactions. It consists of a sequence number and a method. The method MUST match that of the request. For non-REGISTER requests outside of a dialog, the sequence number value is arbitrary. The sequence number value MUST be expressible as a 32-bit unsigned integer and MUST be less than 2**31. As long as it follows the above guidelines, a client may use any mechanism it would like to select CSeq header field values.

Section 12.2.1.1 discusses construction of the CSeq for requests within a dialog.

Example:

```
CSeq: 4711 INVITE
```