



# XMPP

## XEP-0277: Microblogging over XMPP

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This specification defines a method for microblogging over XMPP.

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## 1 Introduction

Microblogging is an increasingly popular technology for lightweight interaction over the Internet. It differs from traditional blogging in that:

- Posts are short (typically less than 140 characters, which is the limit in SMS).
- Posts are in plain text.
- People can reply to your posts, but not directly comment on them.
- People learn about your posts only if they have permission to view them.
- Your microblogging feed is discovered based on your identity at a domain or with a service.

These characteristics map well to instant messaging systems such as those built using Jabber/XMPP technologies (e.g., permissions can be based on existing presence subscriptions as reflected in the XMPP roster or "buddy list"). Furthermore, the push nature of XMPP (especially as formalized in the [Personal Eventing Protocol](#)<sup>1</sup> profile of [Publish-Subscribe](#)<sup>2</sup> overcomes the problems of polling for updates via HTTP, which has caused scaling issues in existing microblogging services. Therefore this specification defines a method for microblogging over XMPP, building on the existing method for transporting Atom syndication data [RFC 4287](#)<sup>3</sup> over XMPP as described in [AtomSub](#)<sup>4</sup>. These XMPP-based methods are complementary to HTTP-based methods, and can provide an XMPP interface to existing microblogging services (which may also be accessible via HTTP, Short Message Service (SMS), and other message transports).

## 2 Protocol

### 2.1 Location

A person's microblog SHOULD be located at a personal eventing (PEP) node whose name is "urn:xmpp:microblog:0" but MAY be located at a generic publish-subscribe node that is not attached to a user's IM account. For instance, if the Shakespearean character Romeo has a JabberID of <romeo@montague.lit> then his microblog would be located at that JID with a node of "urn:xmpp:microblog:0". Outside of native XMPP systems, this node can be referred to as the following XMPP URI (the ":" character from the namespace URN is percent-encoded

---

<sup>1</sup>XEP-0163: Personal Eventing Protocol <<http://xmpp.org/extensions/xep-0163.html>>.

<sup>2</sup>XEP-0060: Publish-Subscribe <<http://xmpp.org/extensions/xep-0060.html>>.

<sup>3</sup>RFC 4287: The Atom Syndication Format <<http://tools.ietf.org/html/rfc4287>>.

<sup>4</sup>Atomsub: Transporting Atom Notifications over the Publish-Subscribe Extension to the Extensible Messaging and Presence Protocol (XMPP) <<http://xmpp.org/internet-drafts/draft-saintandre-atompublishify-07.html>>. Work in progress.

in the query component; see [RFC 5122](#)<sup>5</sup> and [RFC 3986](#)<sup>6</sup>).

```
xmpp:romeo@montague.lit?;node=urn%3Axmpp%3Amicroblog%3A0
```

Naturally, this node can be discovered by contacting `romeo@montague.lit` directly using [Service Discovery](#)<sup>7</sup>.

## 2.2 Subscribing to a Microblog

Let us imagine that Juliet wishes to receive the posts that Romeo publishes to his microblog. She has two options:

1. Implicitly subscribe by advertising support for "urn:xmpp:microblog:0+notify" in her [Entity Capabilities](#)<sup>8</sup> data. Romeo's PEP service then automatically sends posts to her when it receives presence from her, until and unless she sends presence of type unavailable or stops advertising an interest in microblog updates.
2. Explicitly subscribe by sending a formal subscription request to the "urn:xmpp:microblog:0" node at Romeo's JabberID. Romeo's PEP service may send her all posts even if she is offline at the time (depending on service policies regarding presence integration).

## 2.3 Publishing a Post

Romeo can publish a post via any interface provided by his service, such as a website, the Atom Publishing Protocol (see [RFC 5023](#)<sup>9</sup>), SMS, an IM bot, or XMPP pubsub. Here we assume that the post is provided via XMPP pubsub.

The post content itself can be either text ("content" element "type" attribute with "text" value) or XHTML ("content" element "type" attribute with "xhtml" value). If Romeo publishes XHTML content, his client MUST publish two "content" elements: a text one, and a XHTML one. For XHTML publishing, see [Publish-Subscribe](#)<sup>10</sup>.

Note: Publishing via HTTP, AtomPub, SMS, or IM bot is simpler for the client (e.g., because the client does not need to generate an Item ID).

Listing 1: Publishing a post

```
<iq from='romeo@montague.lit/pda'
```

<sup>5</sup>RFC 5122: Internationalized Resource Identifiers (IRIs) and Uniform Resource Identifiers (URIs) for the Extensible Messaging and Presence Protocol (XMPP) <<http://tools.ietf.org/html/rfc5122>>.

<sup>6</sup>RFC 3986: Uniform Resource Identifiers (URI): Generic Syntax <<http://tools.ietf.org/html/rfc3986>>.

<sup>7</sup>XEP-0030: Service Discovery <<http://xmpp.org/extensions/xep-0030.html>>.

<sup>8</sup>XEP-0115: Entity Capabilities <<http://xmpp.org/extensions/xep-0115.html>>.

<sup>9</sup>RFC 5023: The Atom Publishing Protocol <<http://tools.ietf.org/html/rfc5023>>.

<sup>10</sup>XEP-0060: Publish-Subscribe <<http://xmpp.org/extensions/xep-0060.html>>.

```

    id='pub1'
    to='romeo@montague.lit'
    type='set'>
  <pubsub xmlns='http://jabber.org/protocol/pubsub'>
    <publish node='urn:xmpp:microblog:0'>
      <item id='1cb57d9c-1c46-11dd-838c-001143d5d5db'>
        <entry xmlns='http://www.w3.org/2005/Atom'>
          <source>
            <author>
              <name>Romeo Montague</name>
              <uri>xmpp:romeo@montague.lit</uri>
            </author>
          </source>
          <content type='text'>hanging out at the Caf&#233;
            Napolitano</content>
          <link rel='alternate'
            type='text/html'
            href='http://montague.lit/romeo/posts/1cb57d9c-1c46-11
              dd-838c-001143d5d5db' />
          <link rel='alternate'
            href='xmpp:romeo@montague.lit?;node=urn%3Axmpp%3
              Amicroblog%3A0;item=1cb57d9c-1c46-11dd-838c-001143
              d5d5db' />
          <id>tag:montague.lit,2008-05-08:posts-1cb57d9c-1c46-11dd-838
            c-001143d5d5db</id>
          <published>2008-05-08T18:30:02Z</published>
          <updated>2008-05-08T18:30:02Z</updated>
        </entry>
      </item>
    </publish>
  </pubsub>
</iq>

```

## 2.4 Receiving a Post

Because Juliet has sent presence to Romeo including Entity Capabilities data that encapsulates the "urn:xmpp:microblog:0+notify" feature, Romeo's XMPP server will send a PEP notification to Juliet. The notification can include an XMPP message body for backwards-compatibility with Jabber clients that are not pubsub-capable (see Message Body).

Listing 2: Receiving a post

```

<message from='romeo@montague.lit'
  to='juliet@capulet.lit'
  type='headline'>
  <body>hanging out at the Caf&#233; Napolitano</body>
  <event xmlns='http://jabber.org/protocol/pubsub#event'>
    <items node='urn:xmpp:microblog:0'>

```

```

<item id='1cb57d9c-1c46-11dd-838c-001143d5d5db'>
  <entry xmlns='http://www.w3.org/2005/Atom'>
    <source>
      <author>
        <name>Romeo Montague</name>
        <uri>xmpp:romeo@montague.lit</uri>
      </author>
    </source>
    <content type='text'>hanging out at the Caf&#233;
      Napolitano</content>
    <link rel='alternate'
      type='text/html'
      href='http://montague.lit/romeo/posts/1cb57d9c-1c46-11
        dd-838c-001143d5d5db' />
    <link rel='alternate'
      href='xmpp:romeo@montague.lit?;node=urn%3Axmpp%3
        Amicroblog%3A0;item=1cb57d9c-1c46-11dd-838c-001143
        d5d5db' />
    <id>tag:montague.lit,2008-05-08:posts-1cb57d9c-1c46-11dd-838
      c-001143d5d5db</id>
    <published>2008-05-08T18:30:02Z</published>
    <updated>2008-05-08T18:30:02Z</updated>
  </entry>
</item>
</items>
</event>
</message>

```

## 2.5 Replying to a Post

Anyone can publish a post in reply to Romeo's post. Here we assume that a reply comes from Benvolio.

Note: Inclusion of the `<in-reply-to/>` element defined in [RFC 4685](#)<sup>11</sup> indicates the post to which the user is replying. This reply includes two such elements (one pointing to the HTTP URL for the post and the other pointing to the XMPP URI for the post).

Listing 3: Publishing a reply

```

<iq from='benvolio@montague.lit/mobile'
  id='uv2x37s5'
  to='benvolio@montague.lit'
  type='set'>
  <pubsub xmlns='http://jabber.org/protocol/pubsub'>
    <publish node='urn:xmpp:microblog:0'>
      <item id='c4145006-1c53-11dd-b2d5-000bcd82471e'>
        <entry xmlns='http://www.w3.org/2005/Atom'

```

<sup>11</sup>RFC 4685: Atom Threading Extensions <http://tools.ietf.org/html/rfc4685>.

```

        xmlns:thr='http://purl.org/syndication/thread/1.0'>
    <source>
      <author>
        <name>Benvolio Montague</name>
        <uri>xmpp:romeo@montague.lit</uri>
      </author>
    </source>
    <content type='text'>@romeo cappuccino this late in the day?
      </content>
    <link rel='alternate'
          type='text/html'
          href='http://montague.lit/benvolio/posts/c4145006-1c53-11dd-b2d5-000bcd82471e' />
    <link rel='alternate'
          href='xmpp:benvolio@montague.lit?;
.....node=urn%3Axmpp%3Amicroblog%3A0;
.....item=c4145006-1c53-11dd-b2d5-000bcd82471e' />
    <id>tag:montague.lit,2008-05-08:posts-c4145006-1c53-11dd-
      b2d5-000bcd82471e</id>
    <published>2008-05-08T18:31:21Z</published>
    <updated>2008-05-08T18:31:21Z</updated>
    <thr:in-reply-to
      ref='tag:montague.lit,2008-05-08:posts-1cb57d9c-1c46-11
        dd-838c-001143d5d5db'
      type='application/xhtml+xml'
      href='http://montague.lit/romeo/posts/1cb57d9c-1c46-11
        dd-838c-001143d5d5db' />
    <thr:in-reply-to
      ref='tag:montague.lit,2008-05-08:posts-1cb57d9c-1c46-11
        dd-838c-001143d5d5db'
      href='xmpp:romeo@montague.lit?;node=urn%3Axmpp%3
        Amicroblog%3A0;item=1cb57d9c-1c46-11dd-838c-001143
        d5d5db' />
  </entry>
</item>
</publish>
</pubsub>
</iq>

```

Assuming that Romeo has also shared presence with Benvolio and has advertised support for "urn:xmpp:microblog:0+notify", he will receive the reply that Benvolio sent.

## 2.6 Repeating a Post

When Benvolio wants to repeat a Romeo's post, his client publishes the same post under a different name. But to be able to track the repeated post original author, Benvolio's client MAY use two specific <author /> child nodes, <name /> and <uri />, containing, respectively, the name of the original post author, and his XMPP URI (JID).

If a comments link is present (see the [Post Comments](#) section of this document), the client SHOULD repeat it to keep the same discussion about the post.

Listing 4: Repeating a Post

```
<iq from='benvolio@montague.lit/mobile'
  id='pub2'
  to='benvolio@montague.lit'
  type='set'>
  <pubsub xmlns='http://jabber.org/protocol/pubsub'>
    <publish node='urn:xmpp:microblog:0'>
      <item id='1re57d3c-1q46-11dd-748r-024943d2d5rt'>
        <entry xmlns='http://www.w3.org/2005/Atom'>
          <source>
            <author>
              <name>Romeo Montague</name>
              <uri>xmpp:romeo@montague.lit</uri>
            </author>
          </source>
          <content type='text'>hanging out at the Caf&#233;
            Napolitano</content>
          <link rel='alternate'
            type='text/html'
            href='http://montague.lit/benvolio/posts/1re57d3c-1q46-
              11dd-748r-024943d2d5rt' />
          <link rel='alternate'
            href='xmpp:benvolio@montague.lit?;node=urn%3Axmpp%3
              Amicroblog%3A0;item=1re57d3c-1q46-11dd-748r-024943
              d2d5rt' />
          <id>tag:montague.lit,2008-05-08:posts-1re57d3c-1q46-11dd-748
            r-024943d2d5rt</id>
          <published>2008-05-08T18:30:02Z</published>
          <updated>2008-05-08T18:32:02Z</updated>
        </entry>
      </item>
    </publish>
  </pubsub>
</iq>
```

Thus, a different author JID value lets the client know the microblog item has been repeated from another one.

## 2.7 Attaching files to a Post

Romeo might want to attach some files, such as pictures of his last vacations, or documents he wants to share. For each file to publish, Romeo's client MUST add a `<link />` element. The "href" and "rel" attributes MUST be added; the "title", "type" and "length" ones MIGHT be

added.

Listing 5: Attaching some files to a Post

```
<iq from='romeo@montague.lit/pda'
  id='pub3'
  to='romeo@montague.lit'
  type='set'>
  <pubsub xmlns='http://jabber.org/protocol/pubsub'>
    <publish node='urn:xmpp:microblog:0'>
      <item id='1df87v1q-2d12-43se-761w-318790d3g1sq'>
        <entry xmlns='http://www.w3.org/2005/Atom'>
          <source>
            <author>
              <name>Romeo Montague</name>
              <uri>xmpp:romeo@montague.lit</uri>
            </author>
          </source>
          <content type='text'>Beautiful Eiffel Tower!</content>
          <link rel='alternate'
            type='text/html'
            href='http://montague.lit/romeo/posts/1df87v1q-2d12-43
              se-761w-318790d3g1sq' />
          <link rel='alternate'
            href='xmpp:romeo@montague.lit?;node=urn%3Axmpp%3
              Amicroblog%3A0;item=1df87v1q-2d12-43se-761w-318790
              d3g1sq' />
          <link rel='enclosure'
            title='Head_in_the_clouds'
            type='image/jpeg'
            length='156732'
            href='http://montague.lit/romeo/files/uei8327hdz12.jpg
              '>
          <link xmlns='urn:xmpp:microblog:0'
            rel='self'
            title='thumb'
            type='image/jpeg'
            length='31723'
            href='http://montague.lit/romeo/files/
              uei8327hdz12_thumb.jpg' />
        </link>
        <link rel='enclosure'
          title='Trip_report'
          type='application/pdf'
          length='67123'
          href='http://montague.lit/romeo/files/82he1oh2084s.pdf
            ' />
      </id>tag:montague.lit,2008-05-08:posts-1df87v1q-2d12-43se-761
        w-318790d3g1sq</id>
```

```

        <published>2008-05-08T18:35:02Z</published>
        <updated>2008-05-08T18:35:02Z</updated>
    </entry>
</item>
</publish>
</pubsub>
</iq>

```

If client can generate some thumbnails images of the attached file (for pictures, videos or documents), it MAY create one or more <link /> sub-elements to the parent file <link /> element. It MUST set "xmlns" attribute to "urn:xmpp:microblog:0"; "rel" attribute to "self"; "title" attribute to "thumb"; "href" to the path of the thumbnail image. It SHOULD also have a "type" attribute specifying the thumbnail file MIME type.

### 3 Comments

Juliet and Benvolio may want to discuss about latest Romeo's post. Romeo's client MIGHT add a <link /> element to the PubSub item. The element MUST have "rel", "title" and "href" attributes, where "rel" MUST have the "replies" value; "title" MUST have the "comments" value; "href" MUST be an XMPP URI (see [RFC 5122](#)<sup>12</sup> and [RFC 3986](#)<sup>13</sup>).

#### 3.1 Post Comments

We assume Romeo's client first created a comments node (named "urn:xmpp:microblog:0:comments/ID", where "ID" is the microblog item ID, or the SHA-1 encoded attachment URI, as defined in [RFC 3174](#)<sup>14</sup>), with defaults "pubsub#access\_model" and "pubsub#publish\_model" privacy settings (see [Publish-Subscribe](#)<sup>15</sup> for node creation and configuration).

Listing 6: Adding a comments link to a Post

```

<iq from='romeo@montague.lit/pda'
  id='pub4'
  to='romeo@montague.lit'
  type='set'>
  <pubsub xmlns='http://jabber.org/protocol/pubsub'>
    <publish node='urn:xmpp:microblog:0'>
      <item id='2ze57d9c-1c46-21df-830c-002143d3d2qgf'>
        <entry xmlns='http://www.w3.org/2005/Atom'>

```

<sup>12</sup>RFC 5122: Internationalized Resource Identifiers (IRIs) and Uniform Resource Identifiers (URIs) for the Extensible Messaging and Presence Protocol (XMPP) <<http://tools.ietf.org/html/rfc5122>>.

<sup>13</sup>RFC 3986: Uniform Resource Identifiers (URI): Generic Syntax <<http://tools.ietf.org/html/rfc3986>>.

<sup>14</sup>RFC 3174: US Secure Hash Algorithm 1 (SHA1) <<http://tools.ietf.org/html/rfc3174>>.

<sup>15</sup>XEP-0060: Publish-Subscribe <<http://xmpp.org/extensions/xep-0060.html>>.

```

    <source>
      <author>
        <name>Romeo Montague</name>
        <uri>xmpp:romeo@montague.lit</uri>
      </author>
    </source>
    <content type='text'>hanging out at the Caf&#233;
      Napolitano</content>
    <link rel='alternate'
      type='text/html'
      href='http://montague.lit/romeo/posts/2ze57d9c-1c46-21
        df-830c-002143d3d2qgf' />
    <link rel='alternate'
      href='xmpp:romeo@montague.lit?;node=urn%3Axmpp%3
        Amicroblog%3A0;item=2ze57d9c-1c46-21df-830c-002143
        d3d2qgf' />
    <link rel='replies'
      title='comments'
      href='xmpp:pubsub.montague.lit?;node=urn%3Axmpp%3
        Amicroblog%3A0%3Acomments%2
        Fdd88c9bc58886fce0049ed050df0c5f2' />
    <id>tag:montague.lit,2008-05-08:posts-2ze57d9c-1c46-21df-830
      c-002143d3d2qgf</id>
    <published>2008-05-08T18:38:02Z</published>
    <updated>2008-05-08T18:38:02Z</updated>
  </entry>
</item>
</publish>
</pubsub>
</iq>

```

If the comment to publish is the first item of the node, the client MAY add a "link" element, with the "rel=start" attribute. In this way, clients can determine which comment is the first one of a discussion.

### 3.2 Attachement Comments

As we do for [Post Comments](#), Romeo's client MAY create one comments PubSub node for each attachment of a post (see section of [Attaching files to a Post](#) of this document).

The element to create MUST be children of the parent "link" element of the attachment. Some attributes differ from the original commenting specification: "xmlns" attribute MUST be set to value "urn:xmpp:microblog:0"; "title" attribute MUST be set to value "comments\_file".

Listing 7: Adding a comments link to an Attachement

```
<iq from='romeo@montague.lit/pda'
```

```
id='pub5'  
to='romeo@montague.lit'  
type='set'>  
<pubsub xmlns='http://jabber.org/protocol/pubsub'>  
  <publish node='urn:xmpp:microblog:0'>  
    <item id='1af87d4i-3f09-41gt-871e-098182g4b2az'>  
      <entry xmlns='http://www.w3.org/2005/Atom'>  
        <source>  
          <author>  
            <name>Romeo Montague</name>  
            <uri>xmpp:romeo@montague.lit</uri>  
          </author>  
        </source>  
        <content type='text'>I love cranberries!</content>  
        <link rel='alternate'  
          type='text/html'  
          href='http://montague.lit/romeo/posts/1af87d4i-3f09-41  
            gt-871e-098182g4b2az' />  
        <link rel='alternate'  
          href='xmpp:romeo@montague.lit?;node=urn%3Axmpp%3  
            Amicroblog%3A0;item=1af87d4i-3f09-41gt-871e-098182  
            g4b2az' />  
        <link rel='enclosure'  
          title='Delicious'  
          type='image/jpeg'  
          length='91741'  
          href='http://montague.lit/romeo/files/efoq9172kwq.jpg'  
        >  
        <link xmlns='urn:xmpp:microblog:0'  
          rel='replies'  
          title='comments_file'  
          href='xmpp:pubsub.montague.lit?;node=urn%3Axmpp%3  
            Amicroblog%3A0%3Acomments%2  
            Fa9fe0b44ea62c6be71fac8471696fece' />  
        </link>  
        <id>tag:montague.lit,2008-05-08:posts-1af87d4i-3f09-41gt-871  
          e-098182g4b2az</id>  
        <published>2008-05-08T18:54:02Z</published>  
        <updated>2008-05-08T18:54:02Z</updated>  
      </entry>  
    </item>  
  </publish>  
</pubsub>  
</iq>
```

### 3.3 Adding a comment

If Juliet wants to comment Romeo’s latest post, her client MUST then send a new Atom entry to the defined PubSub node.

Note: A comments node SHOULD be located at a generic publish-subscribe node that is not attached to a user’s IM account, but MAY be located at a personal eventing (PEP) node.

Listing 8: Adding a comment to a comments node

```
<iq from='juliet@capulet.lit/pc'
  id='comment1'
  to='pubsub.capulet.lit'
  type='set'>
  <pubsub xmlns='http://jabber.org/protocol/pubsub'>
    <publish node='urn:xmpp:microblog:0:comments/
      dd88c9bc58886fce0049ed050df0c5f2'>
      <item id='b2106a80de39ef5ec6b8f7b69cb610c2'>
        <entry xmlns='http://www.w3.org/2005/Atom'>
          <source>
            <author>
              <name>Juliet Capulet</name>
              <uri>xmpp:juliet@capulet.lit</uri>
            </author>
          </source>
          <content type='text'>She is so pretty!</content>
          <published>2008-05-08T18:39:02Z</published>
        </entry>
      </item>
    </publish>
  </pubsub>
</iq>
```

If Benvolio wants to retrieve the comments node, his client will send a standard PubSub stanza to request all items (see [Publish-Subscribe](#)<sup>16</sup> for all items retrieving).

## 4 Geotagging

Juliet may want to know which places are Romeo’s notices related to. That’s why Romeo’s client MIGHT geotag microblog entries, using the [User Geolocation](#)<sup>17</sup> protocol for storing geolocation informations.

Romeo’s client MUST create a “geoloc” element, with the [User Geolocation](#)<sup>18</sup> reference namespace: “http://jabber.org/protocol/geoloc”.

<sup>16</sup>XEP-0060: Publish-Subscribe <<http://xmpp.org/extensions/xep-0060.html>>.

<sup>17</sup>XEP-0080: User Geolocation <<http://xmpp.org/extensions/xep-0080.html>>.

<sup>18</sup>XEP-0080: User Geolocation <<http://xmpp.org/extensions/xep-0080.html>>.

Listing 9: Geotagging a Post

```

<iq from='romeo@montague.lit/mobile'
  id='pub7'
  to='romeo@montague.lit'
  type='set'>
  <pubsub xmlns='http://jabber.org/protocol/pubsub'>
    <publish node='urn:xmpp:microblog:0'>
      <item id='1zr23z8a-3g12-34fh-750b-120867gjc1sqh'>
        <entry xmlns='http://www.w3.org/2005/Atom'>
          <source>
            <author>
              <name>Romeo Montague</name>
              <uri>xmpp:romeo@montague.lit</uri>
            </author>
          </source>
          <content type='text'>Is lost in the forest. Need help!</content>
          <link rel='alternate'
            type='text/html'
            href='http://montague.lit/romeo/posts/1zr23z8a-3g12-34fh-750b-120867gjc1sqh' />
          <link rel='alternate'
            href='xmpp:romeo@montague.lit?;node=urn%3Axmpp%3Amicroblog%3A0;item=1zr23z8a-3g12-34fh-750b-120867gjc1sqh' />
          <link rel='replies'
            title='comments'
            href='xmpp:pubsub.montague.lit?;node=urn%3Axmpp%3Amicroblog%3A0%3Acomments%2F36ec6dfe61e52b1e2cdb248823520233' />
          <id>tag:montague.lit,2008-05-08:posts-1zr23z8a-3g12-34fh-750b-120867gjc1sqh</id>
          <published>2008-05-08T18:43:01Z</published>
          <updated>2008-05-08T18:43:01Z</updated>
          <geoloc xmlns="http://jabber.org/protocol/geoloc">
            <lat>48.171761</lat>
            <lon>-3.3667986</lon>
            <country>France</country>
            <countrycode>FR</countrycode>
            <region>Brittany</region>
          </geoloc>
        </entry>
      </item>
    </publish>
  </pubsub>
</iq>

```

## 5 Microblog informations

Romeo may want to publish some informations about his microblog, such as its title, an alternate web-version URI or the last time it was updated.

Romeo's client MAY publish these informations once he defined them. If so, his client MUST send them to the "urn:xmpp:microblog:0:informations" node, containing one only item, with the ID set to "0".

Listing 10: Publishing microblog informations

```
<iq from='romeo@montague.lit/pc'
  id='pub8'
  to='romeo@montague.lit'
  type='set'>
  <pubsub xmlns='http://jabber.org/protocol/pubsub'>
    <publish node='urn:xmpp:microblog:0:informations'>
      <item id='0'>
        <entry xmlns='http://www.w3.org/2005/Atom'>
          <source>
            <title>Romeo&apos;s Microblog</title>
            <link href='http://montague.lit/romeo' />
            <id>tag:montague.lit,2008:home</id>
            <updated>2008-05-08T18:30:02Z</updated>
            <author>
              <name>Romeo Montague</name>
              <uri>xmpp:romeo@montague.lit</uri>
            </author>
          </source>
        </entry>
      </item>
    </publish>
  </pubsub>
</iq>
```

## 6 Notifications

When replying to a comment, it is RECOMMENDED the user's client send a notification to the people who commented on the comments node, as defined in a forthcoming specification currently located at <http://xmpp.org/extensions/inbox/notification-inbox.html>.

When quoting an user's name (e.g., by using @user tag), it is also RECOMMENDED to send a similar notification.

## 7 Message Body

Depending on service policies and the value of the "pubsub#include\_body" node configuration option, microblogging notifications SHOULD include a message <body/> element for backwards-compatibility with Jabber clients that are not pubsub-capable. It is RECOMMENDED for the XML character value of the <body/> element to be the same as that of the <content/> child of the Atom <entry/>.

## 8 Security Considerations

### 8.1 Comment author

The client SHOULD check that the comment author informations (provided in the "author" element) are valid, by checking that the "publisher" item attribute value matches the "uri" element value. If there is a difference, the comment MIGHT be displayed, but it is RECOMMENDED to specify there is a security problem.

## 9 IANA Considerations

This document requires no interaction with the [Internet Assigned Numbers Authority \(IANA\)](#)<sup>19</sup>.

## 10 XMPP Registrar Considerations

The [XMPP Registrar](#)<sup>20</sup> is requested to issue an initial namespace of "urn:xmpp:microblog:0".

## 11 XML Schema

This specification re-uses the schema for the Atom content format, i.e., the 'http://www.w3.org/2005/Atom' namespace (see RFC 4287).

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<sup>19</sup>The Internet Assigned Numbers Authority (IANA) is the central coordinator for the assignment of unique parameter values for Internet protocols, such as port numbers and URI schemes. For further information, see <<http://www.iana.org/>>.

<sup>20</sup>The XMPP Registrar maintains a list of reserved protocol namespaces as well as registries of parameters used in the context of XMPP extension protocols approved by the XMPP Standards Foundation. For further information, see <<http://xmpp.org/registrar/>>.

## 12 Acknowledgements

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