

# Improving the FreeBSD Translation Tools



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# The Importance of Translation



bring FreeBSD to non-English speakers  
translators are ambassadors  
enlarge the community: Metcalfe's Law

# The FreeBSD Documentation



books and articles: DocBook XML  
man pages: mdoc(7)  
others

# Whitespace



difficult  
...to see  
...to explain  
...for translators  
...for writers

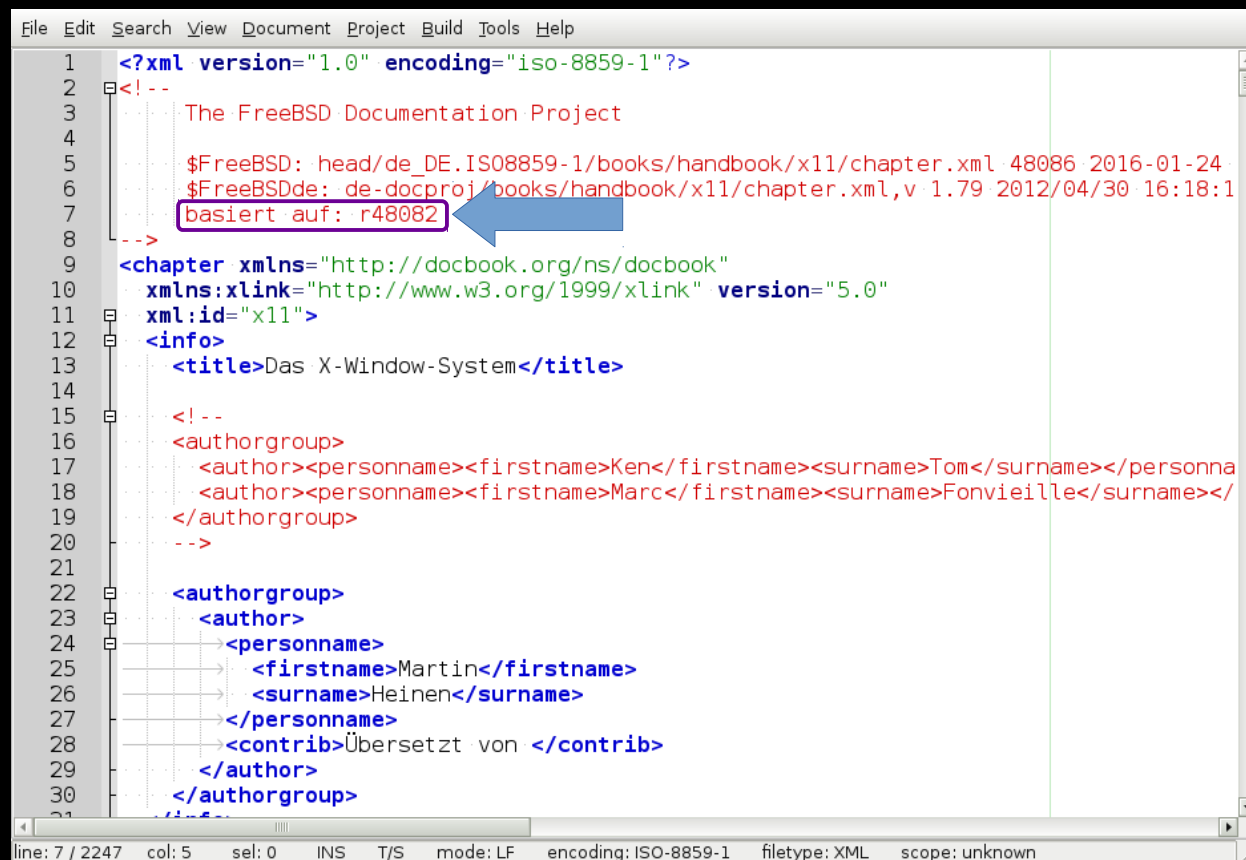
# The Old Translation Method



translators work by commits  
manually  
in order  
by size



# The Old Translation Method



```
File Edit Search View Document Project Build Tools Help
1 <?xml version="1.0" encoding="iso-8859-1"?>
2 <!--
3     The FreeBSD Documentation Project
4
5     $FreeBSD: head/de_DE.ISO8859-1/books/handbook/x11/chapter.xml 48086 2016-01-24
6     $FreeBSDde: de-docproj/books/handbook/x11/chapter.xml,v 1.79 2012/04/30 16:18:1
7     basiert auf: r48082
8 -->
9 <chapter xmlns="http://docbook.org/ns/docbook"
10     xmlns:xlink="http://www.w3.org/1999/xlink" version="5.0"
11     xml:id="x11">
12     <info>
13     <title>Das X-Window-System</title>
14
15     <!--
16     <authorgroup>
17     <author><personname><firstname>Ken</firstname><surname>Tom</surname></persona
18     <author><personname><firstname>Marc</firstname><surname>Fonvieille</surname></
19     </authorgroup>
20     -->
21
22     <authorgroup>
23     <author>
24     <personname>
25     <firstname>Martin</firstname>
26     <surname>Heinen</surname>
27     </personname>
28     <contrib>Übersetzt von </contrib>
29     </author>
30     </authorgroup>
31     </info>
```

line: 7 / 2247 col: 5 sel: 0 INS T/S mode: LF encoding: ISO-8859-1 filetype: XML scope: unknown

# The Old Translation Method

```
% svn log --limit 1 --revision 48083:HEAD --diff x11/chapter.xml
-----
r48105 | wblock | 2016-01-27 15:15:14 -0700 (Wed, 27 Jan 2016) | 3 lines

Add instructions on installing and enabling dbus and hal to the Gnome
section.  Pointed out by forum user oldrancher.

Index: x11/chapter.xml
=====
--- x11/chapter.xml (revision 48104)
+++ x11/chapter.xml (revision 48105)
@@ -1412,7 +1412,7 @@
     <screen>&prompt.root; <userinput>cd /usr/ports/x11/gnome2</userinput>
     &prompt.root; <userinput>make install clean</userinput></screen>

-     <para>For proper operation, <application>GNOME</application>
+     <para><application>GNOME</application>
       requires <filename>/proc</filename> to be mounted.  Add this
       line to <filename>/etc/fstab</filename> to mount this file
       system automatically during system startup:</para>
@@ -1419,7 +1419,28 @@

     <programlisting>proc                /proc                procfs  rw  0    0</programlisting>
(29 more lines not shown...)
```

# The Old Translation Method

```
% svn log -q --revision 48083:HEAD x11/chapter.xml
```

```
-----  
r48105 | wblock | 2016-01-27 15:15:14 -0700 (Wed, 27 Jan 2016)
```

```
-----  
r48109 | wblock | 2016-01-28 15:22:19 -0700 (Thu, 28 Jan 2016)
```

```
-----  
r48115 | jgh | 2016-01-29 12:22:52 -0700 (Fri, 29 Jan 2016)
```

```
-----  
r48214 | jgh | 2016-02-19 18:15:40 -0700 (Fri, 19 Feb 2016)
```

```
-----  
r48238 | wblock | 2016-02-22 09:22:43 -0700 (Mon, 22 Feb 2016)
```

```
-----  
r48289 | blackend | 2016-02-28 07:46:58 -0700 (Sun, 28 Feb 2016)
```

```
-----  
r48513 | wblock | 2016-03-30 15:19:08 -0600 (Wed, 30 Mar 2016)
```

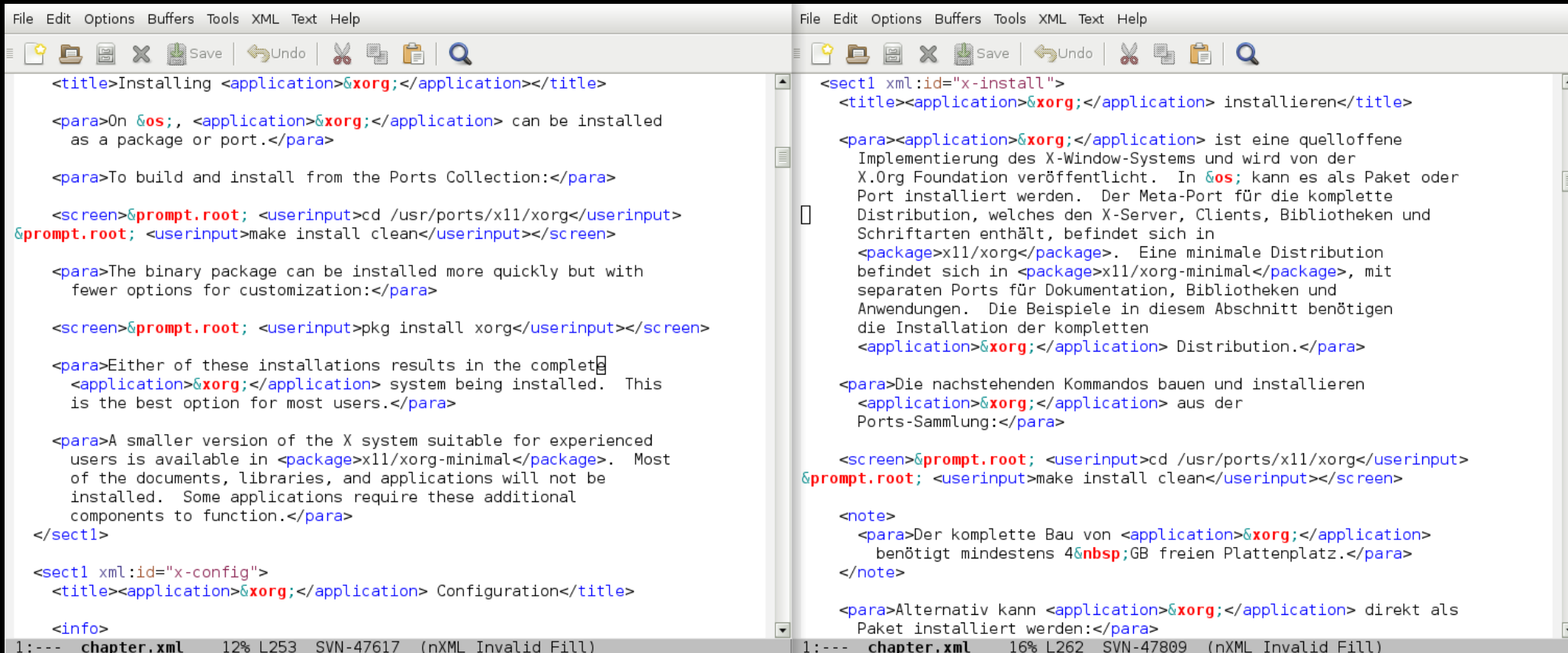
```
-----  
r48529 | wblock | 2016-04-03 12:57:15 -0600 (Sun, 03 Apr 2016)
```

```
-----  
r48673 | wblock | 2016-04-18 18:49:10 -0600 (Mon, 18 Apr 2016)
```

```
-----  
r48719 | bjk | 2016-04-23 14:46:04 -0600 (Sat, 23 Apr 2016)  
-----
```



# The Old Translation Method



```
File Edit Options Buffers Tools XML Text Help
Save Undo Cut Copy Paste Find

<title>Installing <application>&xorg;</application></title>

<para>On &os;, <application>&xorg;</application> can be installed
as a package or port.</para>

<para>To build and install from the Ports Collection:</para>

<screen>&prompt.root; <userinput>cd /usr/ports/x11/xorg</userinput>
&prompt.root; <userinput>make install clean</userinput></screen>

<para>The binary package can be installed more quickly but with
fewer options for customization:</para>

<screen>&prompt.root; <userinput>pkg install xorg</userinput></screen>

<para>Either of these installations results in the complet
<application>&xorg;</application> system being installed. This
is the best option for most users.</para>

<para>A smaller version of the X system suitable for experienced
users is available in <package>x11/xorg-minimal</package>. Most
of the documents, libraries, and applications will not be
installed. Some applications require these additional
components to function.</para>
</sect1>

<sect1 xml:id="x-config">
<title><application>&xorg;</application> Configuration</title>
<info>
1:--- chapter.xml 12% L253 SVN-47617 (nXML Invalid Fill)

File Edit Options Buffers Tools XML Text Help
Save Undo Cut Copy Paste Find

<sect1 xml:id="x-install">
<title><application>&xorg;</application> installieren</title>

<para><application>&xorg;</application> ist eine quelloffene
Implementierung des X-Window-Systems und wird von der
X.Org Foundation veröffentlicht. In &os; kann es als Paket oder
Port installiert werden. Der Meta-Port für die komplette
Distribution, welches den X-Server, Clients, Bibliotheken und
Schriftarten enthält, befindet sich in
<package>x11/xorg</package>. Eine minimale Distribution
befindet sich in <package>x11/xorg-minimal</package>, mit
separaten Ports für Dokumentation, Bibliotheken und
Anwendungen. Die Beispiele in diesem Abschnitt benötigen
die Installation der kompletten
<application>&xorg;</application> Distribution.</para>

<para>Die nachstehenden Kommandos bauen und installieren
<application>&xorg;</application> aus der
Ports-Sammlung:</para>

<screen>&prompt.root; <userinput>cd /usr/ports/x11/xorg</userinput>
&prompt.root; <userinput>make install clean</userinput></screen>

<note>
<para>Der komplette Bau von <application>&xorg;</application>
benötigt mindestens 4&nbsp;GB freien Plattenplatz.</para>
</note>

<para>Alternativ kann <application>&xorg;</application> direkt als
Paket installiert werden:</para>
1:--- chapter.xml 16% L262 SVN-47809 (nXML Invalid Fill)
```

# The New Translation Method



gettext

translators work on PO files

1:1 correspondence

whitespace is not an issue

translation memory

# The New Translation Method



```
% make po  
es_ES.po created, please check and correct the settings in the header  
% poedit es_ES.po  
% make tran
```



# The New Translation Method



File Edit View Catalog Go Help

Open Save Validate Update Fuzzy

Source text — English	Translation — Spanish (Spain)
As of this writing, the next leap second will occur at 2015-Jun-30 23:59:60 UTC. T...	En el momento de escribir estas líneas, el próximo segundo intercalar ocurrirá el 30 ...
Leap seconds are announced by <link xlink:href="http://datacenter.iers.org/"><...>	Los segundos intercalares son anunciados por el <link xlink:href="http://datacenter....>
Standard leap second behavior is described in <link xlink:href="https://tools.ietf....>	El comportamiento estándar de los segundos intercalares se describe en <link xlink...>
Default Leap Second Handling on FreeBSD	Manejo por defecto de los segundos intercalares en FreeBSD
The easiest way to handle leap seconds is with the <acronym>POSIX</acronym>...	La manera mas fácil de manejar segundos intercalares es con las reglas de tiempo ...
If the upstream <acronym>NTP</acronym> servers do not handle leap second...	Si los servidores remotos de <acronym>NTP</acronym> no manejan los segundo...
If <acronym>NTP</acronym> is not being used, manual adjustment of the syst...	Si <acronym>NTP</acronym> no está siendo usado, se requerirá el ajuste manua...
<b>Cautions</b>	<b>Precauciones</b>
Leap seconds are inserted at the same instant all over the world: <acronym>UT...>	Los segundos intercalares se insertan en el mismo instante en todo el mundo: a m...
We believe and expect that FreeBSD, if provided correct and stable <acronym>...>	Creemos y esperamos que FreeBSD, asumiendo que el servicio <acronym>NTP</a...>
However, we caution that practically no applications have ever asked the kernel ...>	De todas formas, asumimos que prácticamente ninguna aplicación ha requerido inf...
Other operating systems and other computers may or may not handle the leap-...>	Otros sistemas operativos y computadoras pueden o no manejar el segundo interc...
It is not unheard of for computers to crash because of leap seconds, and experie...>	No es inaudito que las computadoras fallen a causa de los segundos intercalares, y ...
Please try to make sure nothing horrible happens because of the leap second.	Por favor, intente asegurarse de que nada horrible ocurra a causa del segundo inter...

**Source text:**  
If <acronym>NTP</acronym> is not being used, manual adjustment of the system clock will be required after the leap second has passed.

**Translation:**  
Si <acronym>NTP</acronym> no está siendo usado, se requerirá el ajuste manual del reloj del sistema una vez que el segundo intercalar haya pasado.

**Translation suggestions:**

- Si <acronym>NTP</acronym> no se utiliza, ajuste manual del reloj del sistema se requiere después de que el segundo salto que ha pasado. Ctrl+1 • 100%

**Notes for translators:**  
(itstool) path: sect1/para

Add Comment

Translated: 25 of 25 (100 %)

# Implementation



itstool: <http://itstool.org/>

msgmerge, msgfmt: gettext-tools



# Outcome

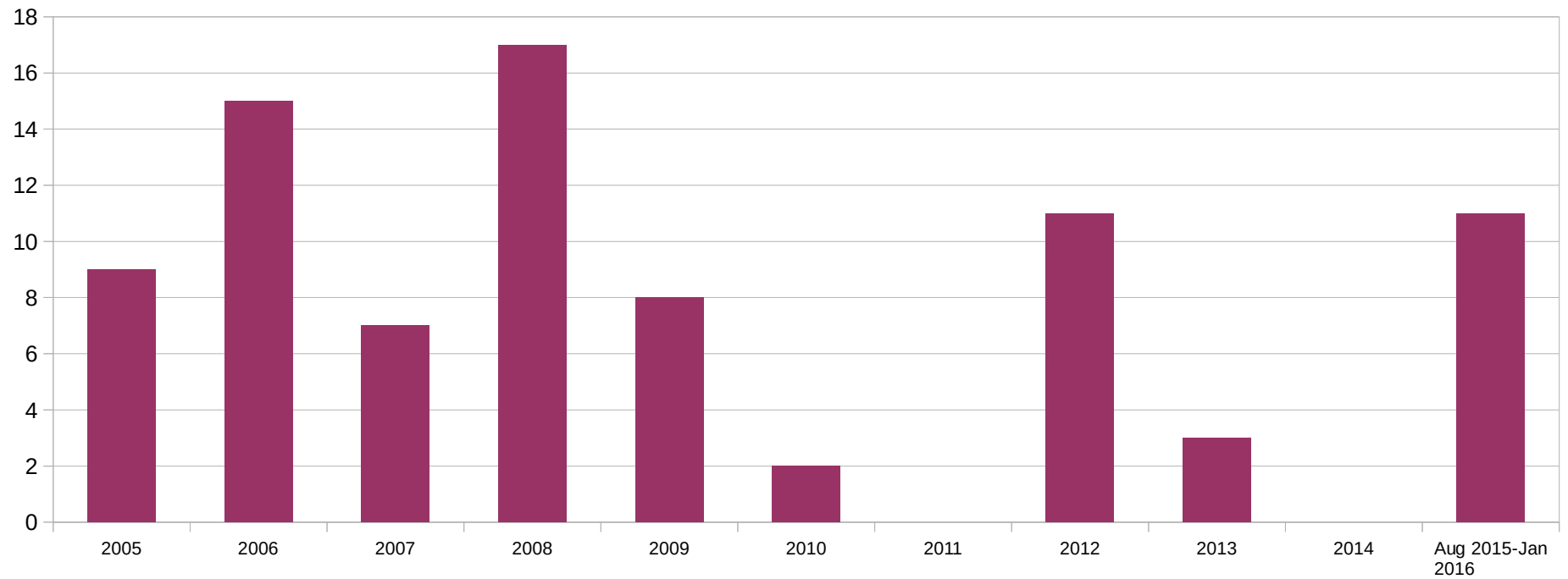


since August 2015,  
11 new translations of articles and books  
into German, Dutch, Spanish,  
Chinese, and Korean

# Outcome



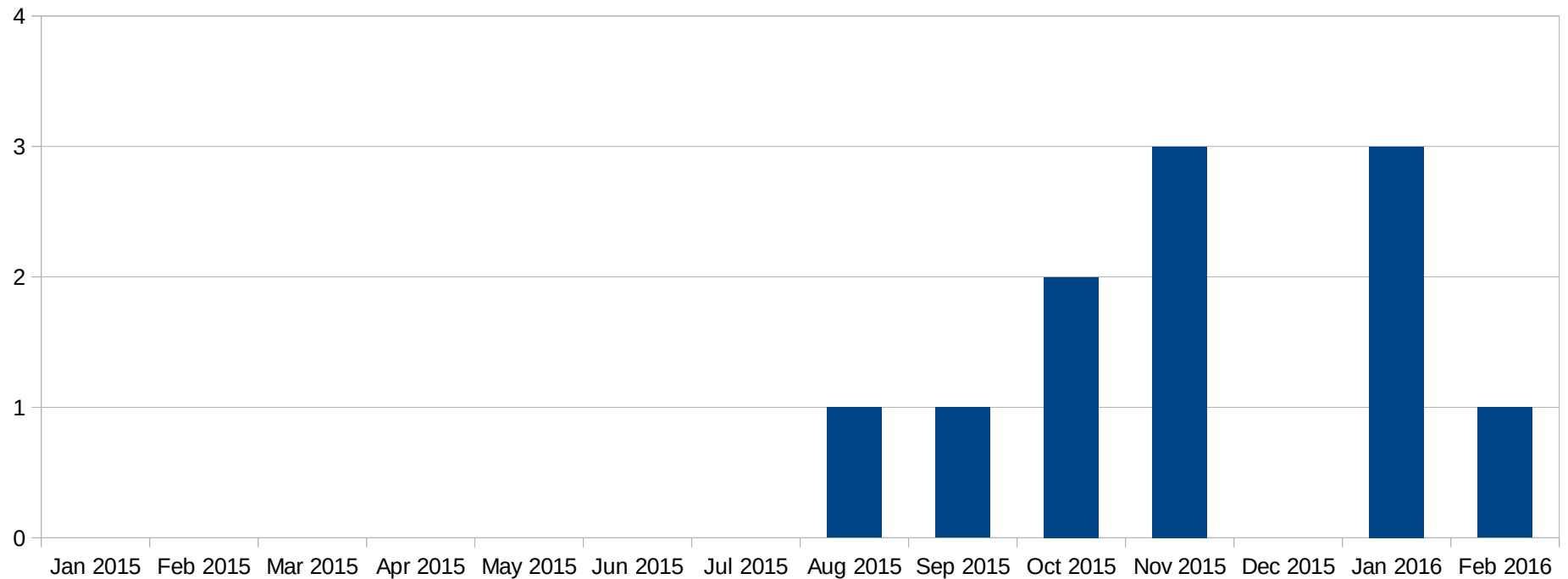
New Translations by Year



# Outcome



New Translations Added by Month, 2015-2016



# Challenges



things that should *not* be translated  
preserving existing translations (xml2po)  
showing context  
more PO editors

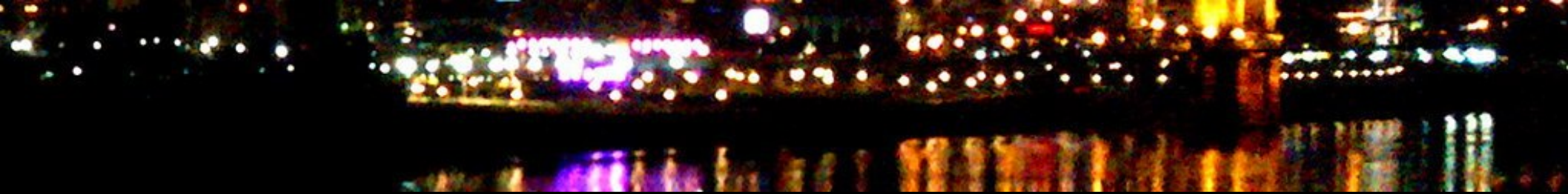
# Potential



man pages  
new doc contributors  
new FreeBSD users and contributors



# What We Learned



cross-pollinating with other projects  
commit-by-commit porting  
technical debt  
UTF-8  
XML techniques

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# Conclusion



<http://wonkity.com/~wblock/translation/>