

atag - tag extender for Acme

(version 0.3.2)

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1. Introduction. This is an implementation of **atag** command for **Acme**. It adds specified commands to a tag of every **Acme**'s window or only in windows, matched by a regular expression.

2. Implementation.

```

// This file is part of atag
//
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// OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
package main
import(
    <Imports 3>
)
var(
    <Global variables 6>
)

```

3.

```

<Imports 3> ≡
    "fmt"
    "os"

```

See also sections 5 and 9.

This code is used in section 2.

7. Let's define an extendend func for fields parsing with escaped symbols and nested quoted strings

```

func args(s string) []string{
    openeds := false
    openedd := false
    escaped := false
    ff := func(r rune) bool{
        if  $\neg$ openeds  $\wedge$   $\neg$ openedd  $\wedge$   $\neg$ escaped  $\wedge$  unicode.IsSpace(r) {
            return true
        }
        if r  $\equiv$  '\\' {
            escaped =  $\neg$ escaped
            return false
        }
        if r  $\equiv$  '\\'  $\wedge$   $\neg$ escaped {
            openeds =  $\neg$ openeds
        }
        if r  $\equiv$  '"'  $\wedge$   $\neg$ escaped {
            openedd =  $\neg$ openedd
        }
        escaped = false
        return false
    }
    return strings.FieldsFunc(s, ff)
}

```

8.

⟨ Parsing of a command line 8 ⟩ \equiv

```

for _, v := range os.Args[1:] {
    sv := args(v)
    f := strings.Split(sv[0], ":")
    if len(f)  $\equiv$  1  $\vee$  len(f[0])  $\equiv$  0 {
        common = append(common, v)
    } else if r, err := regexp.Compile(f[0]); err  $\neq$  nil {
        fmt.Fprintf(os.Stderr, "cannot compile regexp %q: %s\n", f[0], err)
    } else {
        rgx[r] = args(f[1])
        if len(sv) > 1 {
            rgx[r] = append(rgx[r], sv[1:]...)
        }
    }
}

```

This code is used in section 4.

9.

⟨ Imports 3 ⟩ $+\equiv$

```

"github.com/santucco/goacme"

```

10.

```

⟨Start polling of Acme's log 10⟩ ≡
    log, err := goacme.OpenLog()
    if err ≠ nil {
        fmt.Fprint(os.Stderr, err)
        return
    }
    defer log.Close()
    close(sync)
    for ev, err := log.Read(); err ≡ nil; ev, err = log.Read() {
        if ev.Type ≡ goacme.NewWin {
            id := ev.Id
            name := ev.Name
            ⟨Write specified commands to a tag of the new window with id after pipe simbol 12⟩
        }
    }
}

```

This code is used in section 4.

11.

```

⟨Enumerate the opened windows 11⟩ ≡
    go func(){
        ← sync
        ids, err := goacme.WindowsInfo()
        if err ≠ nil {
            fmt.Fprintf(os.Stderr, "cannot get a list of the opened windows of Acme: %v\n", err)
            return
        }
        for _, v := range ids {
            id := v.Id
            name := ""
            if len(v.Tag) > 0 {
                name = v.Tag[0]
            }
            ⟨Write specified commands to a tag of the new window with id after pipe simbol 12⟩
        }
    }()
}

```

This code is used in section 4.

12.

```

⟨Write specified commands to a tag of the new window with id after pipe simbol 12⟩ ≡
    var tag []string
    for r, v := range rgs {
        if r.Match([]byte(name)) {
            tag = append(tag, v...)
        }
    }
    tag = append(tag, common...)
    if err := writeTag(id, tag); err ≠ nil {
        fmt.Fprint(os.Stderr, err)
    }
}

```

This code is used in sections 10 and 11.

13. Let's describe a writing of tag like a function

```
func writeTag(id int, list []string) error{
    ⟨ Check if list is empty 14 ⟩
    ⟨ Open a window w by id 15 ⟩
    ⟨ Read the tag into s 16 ⟩
    ⟨ Remove the tag content before the pipe symbol 17 ⟩
    ⟨ Compose a new tag 18 ⟩
    ⟨ Clear the tag and write the new tag 19 ⟩
    return nil
}
```

14.

```
⟨ Check if list is empty 14 ⟩ ≡
if len(list) ≡ 0 {
    return nil
}
```

This code is used in section 13.

15.

```
⟨ Open a window w by id 15 ⟩ ≡
w, err := goacme.Open(id)
if err ≠ nil {
    return fmt.Errorf("cannot open a window with id %d: %s\n", id, err)
}
defer w.Close()
```

This code is used in section 13.

16.

```
⟨ Read the tag into s 16 ⟩ ≡
f, err := w.File("tag")
if err ≠ nil {
    return fmt.Errorf("cannot get tag file of the window with id %d: %s\n", id, err)
}
var b [200]byte
n, err := f.Read(b[:])
if err ≠ nil {
    return fmt.Errorf("cannot read the tag of the window with id %d: %s\n", id, err)
}
s := string(b[:n])
```

This code is used in section 13.

17.

```
⟨ Remove the tag content before the pipe symbol 17 ⟩ ≡
if n = strings.Index(s, "|"); n ≡ -1 {
    n = 0
} else {
    n++
}
s = s[n:]
```

This code is used in section 13.

18. We remove duplicates from added command

```

⟨Compose a new tag 18⟩ ≡
{
  for _, v := range list {
    s = strings.ReplaceAll(s, v, "")
    s = strings.ReplaceAll(s, strings.Trim(v, "\"'"), "")
  }
  list = append(list, strings.Fields(s)...)
  s = " " + strings.Join(list, " ")
}

```

This code is used in section 13.

19.

```

⟨Clear the tag and write the new tag 19⟩ ≡
if err := w.WriteCtl("cleartag"); err != nil {
  return fmt.Errorf("cannot clear the tag of the window with id %d: %s\n", id, err)
}
if _, err := f.Write([]byte(s)); err != nil {
  return fmt.Errorf("cannot write the tag of the window with id %d: %s\n", id, err)
}

```

This code is used in section 13.

<i>Args</i> : 4, 8.	<i>Open</i> : 15.
<i>args</i> : 7, 8.	<i>openedd</i> : 7.
<i>Close</i> : 10, 15.	<i>openeds</i> : 7.
<i>common</i> : 6, 8, 12.	<i>OpenLog</i> : 10.
<i>Compile</i> : 8.	<i>os</i> : 3, 4, 8, 10, 11, 12.
<i>err</i> : 8, 10, 11, 12, 15, 16, 19.	<i>Read</i> : 10, 16.
<i>Errorf</i> : 15, 16, 19.	<i>Regexp</i> : 6.
<i>escaped</i> : 7.	<i>regexp</i> : 5, 6, 8.
<i>ev</i> : 10.	<i>ReplaceAll</i> : 18.
<i>ff</i> : 7.	<i>rgx</i> : 6, 8, 12.
<i>Fields</i> : 18.	<i>Split</i> : 8.
<i>FieldsFunc</i> : 7.	<i>Stderr</i> : 4, 8, 10, 11, 12.
<i>File</i> : 16.	<i>strings</i> : 5, 7, 8, 17, 18.
<i>fmt</i> : 3, 4, 8, 10, 11, 12, 15, 16, 19.	<i>sv</i> : 8.
<i>Fprint</i> : 10, 12.	<i>sync</i> : 4, 10, 11.
<i>Fprintf</i> : 4, 8, 11.	<i>tag</i> : 12.
<i>goacme</i> : 9, 10, 11, 15.	<i>Tag</i> : 11.
<i>id</i> : 10, 11, 12, 13, 15, 16, 19.	<i>Trim</i> : 18.
<i>Id</i> : 10, 11.	<i>Type</i> : 10.
<i>ids</i> : 11.	<i>unicode</i> : 5, 7.
<i>Index</i> : 17.	<i>WindowsInfo</i> : 11.
<i>IsSpace</i> : 7.	<i>Write</i> : 19.
<i>Join</i> : 18.	<i>WriteCtl</i> : 19.
<i>list</i> : 13, 14, 18.	<i>writeTag</i> : 12, 13.
<i>log</i> : 10.	
<i>main</i> : 2, 4.	
<i>Match</i> : 12.	
<i>Name</i> : 10.	
<i>name</i> : 10, 11, 12.	
<i>NewWin</i> : 10.	

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