Óñòàíîâêà Lirc. Ïîäêëþ÷åíèå ÄÓ ïóëüòà ê OpenSuse 11.2

Ðàçäåë : Ïðîãðàììíîå îáåñïå÷åíèå

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Â ñòàòüå Óñòàíîâêà LXDE íà Open SUSE 11.2, ÿ ïèñàë, ÷òî â êîìïüþòåðå ó ìåíÿ óñòàíîâëåí TV-Tuner LifeView FlyTV Platinum, ðîäíîãî ÄÓ ïóëüòà è IR äàò÷èêà îò íåãî ó ìåíÿ íåáûëî. Íî ó ìåíÿ äàâíî ëåæàë ïóëüò (RM-1500) ñ ðåññèâåðîì (SB0540) îò Audigy 4, êîòîðûé äîëæåí áûë óïðàâëÿòü çâóêîâûì ñîôòîì îò CREATIVE. ß ðåøèë èñïîëüçîâàòü ýòè óñòðîéñòâà äëÿ óïðàâëåíèÿ TVTime, êîòîðûé ÿ âûáðàë äëÿ ïðîñìîòðà ÒÂ.
Â ñòàòüå îïèñûâàåòñÿ ïîäêëþ÷åíèå, êîíêðåòíîãî óñòðîéñòâà CREATIVE SB 0540 è ïóëüòà RM-1500, íî ÿ ïîïûòþñü îïèñàòü â ñòàòüå îáùèå ìîìåíòû óñòàíîâêè è íàñòðîéêè, êîòîðûå, íàäåþñü ïîìîãóò âàì ïîäêëþ÷èòü äðóãèå IR óñòðîéñòâà. Â èíåòåðíåòå ìíîãî èíôîðìàöèè, î íàñòðîéêå Lirc, íî â áîëüøåíñòâå îíà ïîä äèñòðèáóòèâû ñåìåéñòâà Debian, êîòîðûå "íåñêîëüêî" ▪ îòëè÷àþòñÿ îò Open Suse 11.2.

Äëÿ óïðàâëåíèÿ ðàçëè÷íûìè IR óñòðîéñòâàìè â Linux, èñïîëüçóåòñÿ ïàêåò Lirc (Linux Infrared Remote Control), êîòîðûé è áûë óñòàíîâëåí â ñèñòåìå. Â ïàêåò âõîäèò íåñêîëüêî óòèëèò è äåìîí, êîòîðûé è íàäî íàñòðîèòü äëÿ ðàáîòû ñ íàøèì ðåññèâåðîì è ïóëüòîì.
Íà ñàéòå http://www.lirc.org/ â ðàçäåëå äîêóìåíòàöèè, ÿ ïîñìîòðåë ñïèñîê ïîääåðæèâàåìîãî îáîðóäîâàíèÿ Detailed list of supported hardware, â êîòîðîì áûëî íàéäåíî ìîå óñòðîéñòâî.
Ðåññèâåð áûë ïîäêëþ÷åí â USB, è â ñèñòåìå ïîÿâèëîñü íîâîå óñòðîéñòâî /dev/usb/hiddev0, íà âñÿêèé ñëó÷àé ÿ äàë ïðàâà âñåì ïîëüçîâàòåëÿì íà ýòî óñòðîéñòâî.chmod 666 /dev/usb/hiddev0
Íàñòðîéêè lirc õðàíÿòüñÿ â ôàéëå /etc/sysconfig/lirc, îòêðûâàåì åãî íà ðåäàêòèðîâàíèå. Íèæå ìîé ôàéë /etc/sysconfig/lirc, â êîòîðûé ÿ äîáàâèë ñâîè ïðèìå÷àíèÿ íà ðóññêîì, ê òåì çíà÷åíèÿì êîòîðûå ÿ ìåíÿë.##
Path: Hardware/Lirc
Description: lirc (infrared remote control) configuration
Type: string
Default: "660"
ServiceRestart: lirc
#
permissions for /dev/lircd
#
LIRCD_DEV_PERMISSIONS="666"
#Äàë ïðàâà äëÿ âñå ïîëüçîâàòåëåé

Type: string
Default: "root:video"
#
owner and group for /dev/lircd
#
LIRCD_DEV_OWNER="root:video"

Type: string
Default: ""
#
use given driver

#
LIRCD_DRIVER="sb0540"
#Äðàéâåð óñòðîéñòâà íàøåë â http://www.lirc.org/html/table.html

Type: string
Default: ""
#
read from given device
#
LIRCD_DEVICE="/dev/usb/hiddev0"
#Ìîå óñòðîéñòâî êîòîðîå ñîçäàëîñü ïðè ïîäêëþ÷åíèè ðåñèâåðà â usb

Type: string(lirc_bt829,lirc_gpio,lirc_i2c,lirc_it87,lirc_parallel,lirc_sir,ir-kbd-i2c,ir-kbd-gpio)
Default: ""
#
load given lirc driver module
#
LIRC_MODULE=""

Type: string
Default: ""
#
listen for network connections on specified port.
WARNING: don't use this on a machine with an internet
connection as lircd is running as root!
#
LIRCD_LISTENPORT=""

Type: string
Default: ""
#
connect lircd to specified host
#
LIRCD_CONNECT=""

Äàëåå íàäî ñîçäàòü /etc/lircd.conf, â êîòîðîì îïèñàíû êîäû êíîïîê ïóëüòà. Â äèðåêòîðèè /usr/share/lirc/remotes ëåæàò ãîòîâûå îïèñàíèÿ ðàçëè÷íûõ ïóëüòîâ, è òàì äàæå ÿ íàøåë ñâîé ïóëüò â êàòàëîãå /creative/lircd.conf.alsa_usb, íî ñ ýòèì êîíôèãîì íè÷åãî íå ðàáîòàëî. Ïîýòîìó ÿ ñîçäàë ñâîé êîíôèã, âîñïîëüçîâàâøèñü ïðîãðàììîéirrecord -H -d /dev/ --disable-namespace /etc/lircd.conf
äëÿ ìîåãî ðåñèâåðàirrecord -H sb0540 -d /dev/usb/hiddev0 --disable-namespace /etc/lircd.conf
Íà ïðèãëàøåíèå çàæàòü êíîïêó, çàæèìàåì íà ïóëüòå ÄÓ êàêóþ-íèáóäü êíîïêó è äåðæèì åå. Íà ýêðàíå ïðè íàæàòèè äîëæíû ïîÿâëÿòüñÿ òî÷êè.
Äàëåå ïðîãðàììà ñïðîñèò, êàê áóäåò íàçûâàòüñÿ êíîïêà. Íàáèðàåì, íàïðèìåð, 1, äàâèì "Enter" è æìåì íà ïóëüòå ÄÓ òîæå "1", çàòåì 2, "Enter", "2" íà ÄÓ, è ò.ä. âñå êíîïêè. Ïîñëå ââîäà âñåõ êíîïîê ïóëüòà íàæèìàåì ïðîñòî "Enter" è çàòåì ïðîãðàììà ïîïðîñèò íàæèìàòü êàêóþ-íèáóäü êíîïêó. Íåáîõîäèìî íå ÇÀæèìàòü, à ÍÀæàòü, êàê ìîæíî áûñòðåå. Â ðåçóëüòàòå ïîëó÷èòñÿ /etc/lircd.conf ïðèìåðíî ñ òàêèì ñîäåðæèìûì
Please make this file available to others
by sending it to

```
#
# this config file was automatically generated
# using lirc-0.8.6(sb0540) on Wed Jun  2 02:21:43 2010
#
# contributed by
#
# brand:                    Creative
# model no. of remote control: RM-1500
# devices being controlled by this remote: Audigy 4
#

begin remote

  name  Creative_RM-1500
  bits           16
  eps            30
  aeps           100

  one             0     0
  zero            0     0
  pre_data_bits   16
  pre_data       0x8322
  gap          103967
  toggle_bit_mask 0x0

    begin codes
 POWER               0x000000000000619E    # Power
 1                   0x0000000000008B74    # 1
 2                   0x0000000000008F70    # 2
 3                   0x000000000000906F    # 3
 4                   0x0000000000008A75    # 4
 5                   0x000000000000847B    # 5
 6                   0x0000000000007887    # 6
 7                   0x0000000000008976    # 7
 8                   0x000000000000837C    # 8
 9                   0x0000000000007788    # 9
 0                   0x000000000000807F    # 0
 CMSS                0x000000000000718E    # CMSS
 EAX                 0x0000000000008C73    # EAX
 MUTE                0x0000000000006E91    # Mute
 VOLUMEDOWN          0x000000000000639C    # Vol_Down
 VOLUMEUP            0x000000000000629D    # Vol_Up
 UP                  0x0000000000007B84    # Up
 LEFT                0x0000000000008778    # Left
 OK                  0x000000000000817E    # Ok
 RIGHT               0x000000000000758A    # Right
 DOWN                0x0000000000008D72    # Down
 RETURN              0x0000000000008E71    # Return
 START               0x0000000000008877    # Start
```

```
CANCEL              0x0000000000007C83    # Cancel
REC                 0x000000000000738C    # Rec
OPTIONS             0x000000000000827D    # Options
DISPLAY             0x0000000000007689    # Display
PREVIOUS            0x0000000000007F80    # Previous
PLAY                0x0000000000007986    # Play
NEXT                0x0000000000007A85    # Next
SLOW                0x0000000000007D82    # Slow
STOP                0x000000000000857A    # Stop
STEP                0x0000000000007E81    # Step


    end codes

end remote
```

Çàïóñêàåì äåìîí lircsudo /etc/init.d/lirc start
Íåîáõîäèìî áûëî áû ïðîâåðèòü, ðàáîòàåò ëè òî ÷òî ìû íàñòðîèëè
. À òåïåðü çàïóñêàåì irw è íàæèìàåì êíîïêè íà ïóëüòå, åñëè âñå íîðìàëüíî, òî âû ïîëó÷èòå ïðèìåðíî òàêîå000000008322847b 00 5 Creative_RM-1500
000000008322847b 00 5 Creative_RM-1500
000000008322906f 00 3 Creative_RM-1500
000000008322619e 00 POWER Creative_RM-1500 Æåëàòåëüíî ïðîâåðèòü ÂÑÅ êíîïêè íà ïóëüòå è ïðîâåðèòü ïðàâèëüíîñòü êîäîâ. Ó ìåíÿ íàïðèìåð, íåêîòîðûå êíîïêè ñðàáàòûâàëè íåïðàâèëüíî, ïîêà íå óñòàíîâèë toggle_bit_mask 0x0 â /etc/lircd.conf.
Îñòàëîñü íàñòðîèòü ïðèëîæåíèÿ äëÿ ðàáîòû ñ lirc. Íàñòðîéêà ïðèëîæåíèé ïðîèñõîäèò ÷åðåç ôàéëû /etc/.lircrc (êîòîðûé îáùèé äëÿ âñåõ ïîëüçîâàòåëåé) è/èëè /home//.lircrc äëÿ êàæäîãî îòäåëüíî. ×àñòü ïðèëîæåíèé èìåþò íàòèâíóþ ïîääåðæêó lirc (mplayer,audacious), äëÿ òåõ æå ïðèëîæåíèé êîòîðûå íå óìåþò ðàáîòàòü ñ lirc, íî ðàáîòàþò ñ êîìàíäíîé ñòðîêîé åñòü óòèëèòà irexec, êîòîðàÿ ïîçâîëÿåò âûïîëíÿòü ëþáûå êîìàíäû, ïðèíàæàòèè êíîïê ïóëüòà, â êà÷åñòâå ïðèìåðà ÿ ïðèâåäó ñâîè ôàéëû êîíôèãóðàöèè äëÿ ðåãóëèðîâêè çâóêà ñ ïóëüòà è TVtime. ~/.lircrc include ~/.lirc/vlc
include ~/.lirc/tvtime

```
begin
prog = irexec
remote=*
button = VOLUMEUP
config = amixer sset Master,0 5%+
repeat = 0
delay = 0
end

begin
prog = irexec
remote=*
button = VOLUMEDOWN
config = amixer sset Master,0 5%-
repeat = 0
delay = 0
```

```
end

begin
button = MUTE
prog = irexec
config = amixer sset Master mute
config = amixer sset Master unmute
repeat = 0
delay = 0
end
```

~/.lirc/tvtime begin

```
button = POWER
prog = irexec
config = tvtime &
config = tvtime-command QUIT
end

begin
   prog = irexec
   button = UP
   config = tvtime-command UP
   repeat = 1
end
begin
   prog = irexec
   button = DOWN
   config = tvtime-command DOWN
   repeat = 1
end

begin
   prog = irexec
   button = DISPLAY
   config = tvtime-command DISPLAY_INFO
   repeat = 1
end

begin
   prog = irexec
   button = MUTE
   config = tvtime-command TOGGLE_MUTE
end

begin
```

```
    prog   = irexec
    button = 1
    config = tvtime-command CHANNEL_1
end
begin
    prog   = irexec
    button = 2
    config = tvtime-command CHANNEL_2
end
begin
    prog   = irexec
    button = 3
    config = tvtime-command CHANNEL_3
end
begin
    prog   = irexec
    button = 4
    config = tvtime-command CHANNEL_4
end
begin
    prog   = irexec
    button = 5
    config = tvtime-command CHANNEL_5
end
begin
    prog   = irexec
    button = 6
    config = tvtime-command CHANNEL_6
end
begin
    prog   = irexec
    button = 7
    config = tvtime-command CHANNEL_7
end
begin
    prog   = irexec
    button = 8
    config = tvtime-command CHANNEL_8
end
begin
    prog   = irexec
    button = 9
    config = tvtime-command CHANNEL_9
end
begin
    prog   = irexec
    button = 0
    config = tvtime-command CHANNEL_0
end
```

```
begin
   prog = irexec
   button = OK
#    config = tvtime-command ENTER
   config = tvtime-command SHOW_MENU &
   config = tvtime-command ENTER
end
#begin
#    prog = irexec
#    button = OK
#    config = tvtime-command MENU_SHOW
#end
```

```
begin
   prog = irexec
   button = RETURN
   config = tvtime-command CHANNEL_JUMP
   repeat = 1
end
```

Äëÿ íîðìàëüíîé ðàáîòû irexec åãî íàäî ñíà÷àëà çàïóñòèòü êàê äåìîí irexec -d è äîáàâèòü â àâòîçàãðóçêó îêîíîãî ìåíåäæåðà.
Âîò ñîáñòâåííî è âñå.
Óäà÷è!

Ïðèìå÷àíèå: Åñëè ó TV-tunera åñòü ïîääåðæêà ïóëüòà, òî íî (ïóëüò) âèäèòñÿ ñèñòåìîé, êàê îáû÷íûå óñòðîéñòâî ââîäà /dev/input/eventX (ãääå X íîìåð óñòðîéñòâà). Êàê ñâîíàõîäçíàÿ êëàâèàòóðà. cat /proc/bus/input/devices âûâåäåò âàì âñå âàøè óñòðîéñòâà input. Äëÿ åãî ðàáîòû ïîä lirc èñïîëüçóéòå äðàéâåð devinput, à â êà÷åñòâå óñòðîéñòâà /dev/input/eventX.