



DL7BJ

Amateur Radio Station

Linux & Amateurfunk

Linux als Betriebssystem beim Amateurfunk

Version 1.00 7. November 2014

Tom, DL7BJ, tom@dl7bj.de

Entwicklung von Unix

1972-1974 AT&T Unix

- 1963 - Entwicklung von Multics - System für Großrechner
- 1969 - Entwicklung von Unix in Assembler auf DEC PDP-7
- 1972 - Programmiersprache C von Dennis Ritchie
- 1972 - Umsetzung von Unix in C

Entwicklung von Unix

Digital Equipment Corporation PDP-7



Entwicklung von Unix

Meilensteine

- 1974 weitere Entwicklung von Unix aus der AT&T Version
- 1977 erste Berkeley Software Distribution BSD auf Magnetband
- 1980 Xenix von Microsoft - wurde später SCO Unix
- 1983 Unix System V
- 1987 Lehrsystem Minix von Andreas S. Tanenbaum
- 1989 NeXTStep basierend auf BSD und Mach-Kernel, Steve Jobs
- 1991 Linux Version 0.01
- 2001 Mac OS X basierend auf BSD und Mach-Kernel, Apple

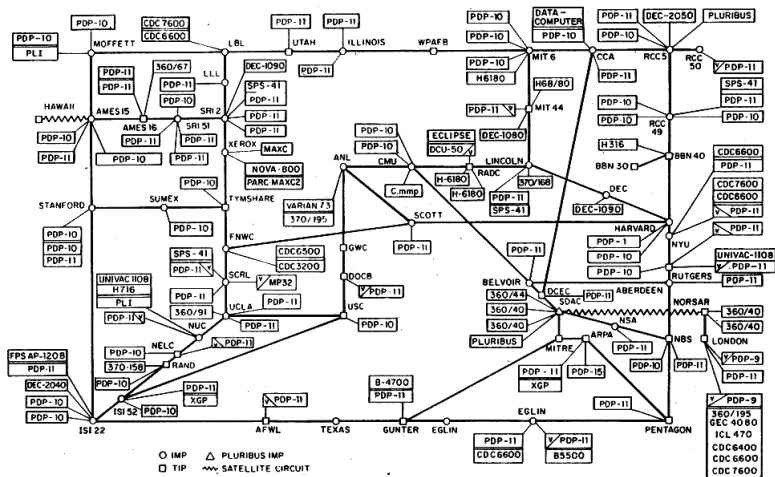
Entwicklung des Internets

Arpanet, Usenet, Fidonet, Internet

- 1969 Arpanet zum Datenaustausch zwischen den Unix-Systemen
- 1973 frühe Version von TCP, zuverlässigere Verbindungen
- 1979 Entstehung des Usenet, Diskussionsgruppen, Mail
- 1981 Spezifizierung von IPv4, ICMP und TCP, das heutige TCP/IP
- 1983 Umstellung der Systeme auf das Internet-Protokoll
- 1984 FidoNet - privates Netzwerk für Mailboxen
- 1989 Beginn der Kommerzialisierung des Internets
- 1991 Präsentation des World Wide Web

Entwicklung des Internets

ARPANET LOGICAL MAP, MARCH 1977



(PLEASE NOTE THAT WHILE THIS MAP SHOWS THE MOST POPULATION OF THE NETWORK ACCORDING TO THE BEST INFORMATION OBTAINABLE, NO CLAIM CAN BE MADE FOR ITS ACCURACY)

NAMES SHOWN ARE IMP NAMES, NOT (NECESSARILY) HOST NAMES

Entwicklung von Linux

Linus Benedict Torvalds

- 1988 Beginn des Informatik-Studiums an der Universität Helsinki
- Jan 91 Erster PC, ein 386er mit DOS, Installation von Minix
- Entwicklung einer Terminal-Emulation für die Verbindung zum Uni-Rechner, einer VAX unter DEC Ultrix
- Jul 91 Anfrage im Usenet nach der POSIX Spezifikation
- Aug 91 erster Artikel zu Linux im Usenet

From: torv...@klaava.Helsinki.FI (Linus Benedict Torvalds)
Newsgroups: comp.os.minix
Subject: What would you like to see most in minix?
Summary: small poll for my new operating system
Date: 25 Aug 91 20:57:08 GMT
Organization: University of Helsinki

Hello everybody out there using minix -

I'm doing a (free) operating system (just a hobby, won't be big and professional like gnu) for 386(486) AT clones. This has been brewing since april, and is starting to get ready. I'd like any feedback on things people like/dislike in minix, as my OS resembles it somewhat (same physical layout of the file-system (due to practical reasons) among other things).

I've currently ported bash(1.08) and gcc(1.40), and things seem to work. This implies that I'll get something practical within a few months, and I'd like to know what features most people would want. Any suggestions are welcome, but I won't promise I'll implement them :-)

Linus (torv...@kruuna.helsinki.fi)

PS. Yes - it's free of any minix code, and it has a multi-threaded fs. It is NOT protable (uses 386 task switching etc), and it probably never will support anything other than AT-harddisks, as that's all I have :-).

Entwicklung von Linux

Meilensteine

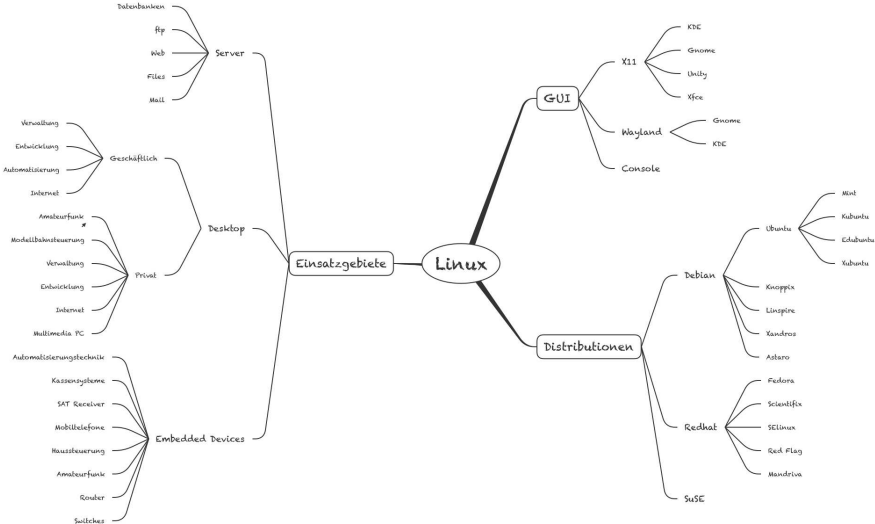
- Sep 91 Linux Version 0.0.1, an Minix orientiert - 8.413 Zeilen Quellcode
- Mar 94 Linux Version 1.0.0 - 170.581 Zeilen Quellcode
- Okt 14 Linux Version 3.17 - 18.864.388 Zeilen Quellcode

Entwicklung von Linux

Distributionen

- 1993 Erste weltweit verbreitete Distribution war Slackware 1.0.0
- 1993 Debian GNU/Linux
- 1994 Red Hat Linux
- 1996 S.u.S.E Linux, Nürnberg
- 2004 Ubuntu (Kubuntu, Xubuntu)
- 2006 Linux Mint (LMDE, Cinnamon, Mate, KDE, Xfce)

Übersicht



Einsatzgebiete

Beispiele von Einsatzgebieten

- Dateiserver, Webserver, Mailserver, Datenbankserver, Desktop
- Embedded Devices, SPS (Wago), Meßgeräte
- Netzwerktechnik - Router & Switches, W-LAN Router
- Mobiltelefone & Tablets, Navigationssysteme, SAT Receiver
- Flughafentechnik, Flugkontrolle, Verkehrskontrolle
- 140 Notebooks der ISS, Steuerungstechnik der ISS
- NASA, IBM, LHC/CERN Genf, Google
- Top 500 Supercomputer davon 476 Linux-Systeme, IBM Blue Gene/Q mit 98.304 Prozessoren

Benutzeroberflächen

Überblick

- Standard ist eine Textkonsole
- X Window Server und Desktop-Umgebung werden wie andere Programme gestartet
- In der Regel erfolgt dies beim Systemstart
- Freie Wahl der Benutzeroberfläche
- Einige Oberflächen sind von der Distribution abhängig, z.B. Unity gibt es nur bei der Ubuntu Distribution

Benutzeroberflächen - X-Window

The screenshot displays a classic X-Window desktop environment. At the top, a taskbar contains several window icons: 'xconsole', 'root', 'xterm', 'xbiff', 'xman', 'oclock', and 'xdogo'. The 'xman' window is active, showing a 'Manual Browser' interface with 'Help', 'Quit', and 'Manual Page' buttons. Below this, a 'Manual Page' window is open, displaying the manual for 'xset(1)'. The manual text includes sections for NAME, SYNOPSIS, DESCRIPTION, and OPTIONS. Other windows include 'oclock' (a clock), 'xdogo' (a large black 'X' logo), and 'nabook' (a small window with a bar chart). At the bottom, a taskbar shows a list of system logs and processes, including 'octave-bug-2.1.72', 'ncgen', 'ncdump', 'blas-config', 'oneko', 'neko', 'unrar', 'xdalclock', 'xsetroot', 'oclock', 'xconsole', 'xcalc', 'xbiff', 'xset', 'xman', 'xeyes', and 'xrenshot'. The desktop background is a dark, textured pattern.

Manual Page

Options Sections The current manual page is: xset(x).

XSET(1) XSET(1)

NAME

xset - user preference utility for X

SYNOPSIS

```
xset [-display display] [-b] [b on/off] [b [volume [pitch [duration]]]
[[-bc] [-c] [c on/off] [c [volume]] [[-dpm] [dpm] standby [suspend
[ off]]] [dpm] force standby/suspend/off/on] [[-f] [f] [++]]
pat] [pat] [...]] [fp default] [fp refresh] [[-l] [l] [integer]] [led
on/off] [m[ouse]] [accel_mult[/accel_div] [threshold]] [m[ouse]
default] [p [pixel color]] [[-r] [r [keycode]]] [r on/off] [r rate delay
[rate]]] [s [length [period]]] [s blank/noblank] [s expose/noexpose] [s
on/off] [s default] [s activate] [s reset] [q]
```

DESCRIPTION

This program is used to set various user preference options of the display.

OPTIONS

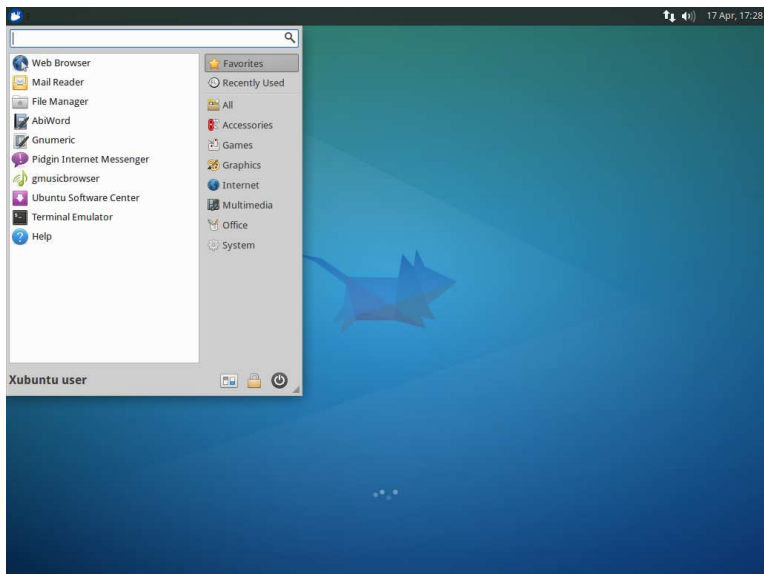
-display *display*
This option specifies the server to use; see *X(7)*.

b The **b** option controls bell volume, pitch and duration. This option accepts up to three numerical parameters, a preceding dash(-), or a 'on/off' flag. If no parameters are given, or the 'on' flag is used, the system defaults will be used. If the dash or 'off' are given, the bell will be turned off. If only one numerical parameter is given, the bell volume will be set to that value, as a percentage of its maximum. Likewise, the second numerical parameter specifies the bell pitch, in hertz, and the third numerical parameter specifies the duration in milliseconds. Note that not all hardware can vary the bell characteristics. The X server will set the characteristics of the bell as closely as it can to the user's specifications.

bc The **bc** option controls *bug compatibility* mode in the server, if

Dec 5 23:55 octave-bug-2.1.72
Dec 5 23:55 octave-bug -> octave-bug-2.1.72
Dec 5 23:55 octave-2.1.72
Dec 5 23:55 octave -> octave-2.1.72
Dec 5 23:55 mkocfile-2.1.72
Dec 5 23:55 mkocfile -> mkocfile-2.1.72
Dec 5 23:55 ncgen
Dec 5 23:55 ncdump
Dec 5 23:55 blas-config
Dec 9 12:31 oneko
Dec 9 13:56 neko -> oneko
Dec 12 21:54 unrar
Jan 29 20:23 xdalclock
Feb 15 23:08 xsetroot
Feb 15 23:11 oclock
Feb 15 23:11 xconsole
Feb 15 23:19 xcalc
Feb 15 23:19 xbiff
Feb 15 23:20 xset
Feb 15 23:20 xman
Feb 15 23:20 xeyes
Feb 15 23:20 .
xrenshot

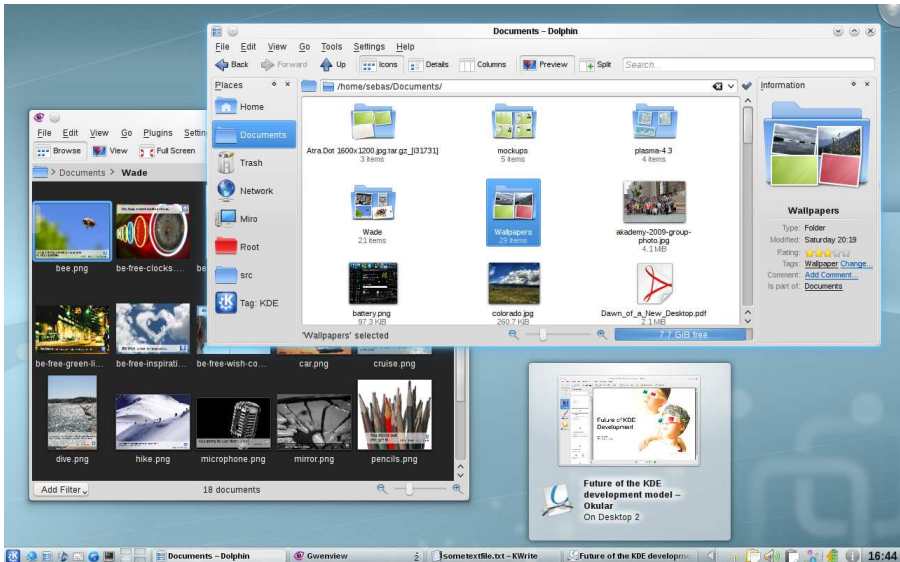
Benutzeroberflächen - Xfce (Xubuntu)



Benutzeroberflächen - Mate (Linux Mint, Gnome 2)



Benutzeroberflächen - KDE (Kubuntu)



Benutzeroberflächen - Unity (Ubuntu)

Terminal

```
tom@tesla: ~  
QRQ v0.3.1 by Fabian Kurz, DJ1YFK  
Homepage and TopList: http://f.kurz.net/ham/qrq.html  
  
Usage:  
After entering your callsign, 50 random callsigns  
from a database will be sent. After each callsign,  
enter what you have heard. If you copied correctly,  
full points are credited and the speed increases by  
2 WpM -- otherwise the speed decreases and only a  
fraction of the points, depending on the number of  
errors is credited.  
  
F6 repeats a callsign once, F10 quits.  
  
Settings can be changed with F5 (or in qrqc).  
  
Score statistics (requires gnuplot) with F7.  
  
Please enter your callsign: DL7BJ INS
```

Toplist

YT6W	202472
HABKW	148892
DL4UNY	145549
W6ZBA	106647
SV2KBS	98758
YT1BX	97934
DK2RD	93118
N06N	92833
LB1GB	92768
DL4DZ	92702
HB9DHG	90650
DF6FR	90337
OH1FJV	88986
AK7V	86857
SJ2W	85293
ON4KLG	84027
DL4VAP	83606
ZL2BSJ	83537
DL1KSE	80278
K06U	79857

DL7BJ @ tesla - Linux 3.13.0-36-generic

UTC 20:32:11 LT 22:32:11
Mi, 2014-10-08 Mi, 2014-10-08

Mission time: 2d 0h 10m
Mission load: 0.64 0.63 0.67
CPU(1) Usage: 23% 1650
CPU(2) Usage: 23% 1320

RAM Usage: 3.07GiB/7.41GiB - 41%
Swap Usage: 0B / 9.76GiB - 0%
Processes: 197 Running: 0

Networking (vLan0):
Down: 0B /s Up: 66 /s

File systems:
/ 47.3GiB/283GiB

Temperatures:
CPU: 40.0 GPU: 58.0

IP-Addresses:
eth0:No Address Global:91.60.157.20
vLan:192.168.178.73 VPN :No Address

Process-List:

Name	PID	CPU%	MEM%
Xorg	2119	7.65	1.37
VirtualBox	28583	5.61	8.66
conky	3052	1.53	0.97
certlog	16538	1.02	1.27
compiz	2982	1.02	1.58
doublecmd	25222	0.51	0.45
kworkeer/u4-2	17783	0.51	0.00
kworkeer/0-2	24446	0.51	0.00
pulseaudio	2798	0.51	0.18

DL7BJ
Amateur Radio Station

http://www.kurz.net/~fabian/qrq/ - 2017

Software













Ubuntu Software-Center

Alle Anwendungen | Installiert | Verlauf

Wissenschaft & Ingenieurwesen

- Astronomie
- Biologie
- Chemie
- Elektronik
- Geografie
- Geologie
- Informatik & Robotik
- Mathematik
- Physik
- Technik
- Alle 350

Bestbewertet unter Wissenschaft & Ingenieurwesen

 GeoGebra Mathematik ★★★★★ (70) Kostenlos	 Stellarium Astronomie ★★★★★ (445) Kostenlos	 Kommandozeilengest... System ★★★★★ (17) Kostenlos	 Periodensystem Chemie ★★★★★ (119) Kostenlos	 GNU Octave Mathematik ★★★★★ (15) Kostenlos
 Spyder Entwicklungsum... ★★★★★ (38) Kostenlos	 wxMaxima Mathematik ★★★★★ (35) Kostenlos	 R Mathematik ★★★★★ (6) Kostenlos	 Tux Math Mathematik ★★★★★ (40) Kostenlos	 KmpPlot Mathematik ★★★★★ (22) Kostenlos
 MATLAB Mathematik ★★★★★ (39) Kostenlos	 Kalzium (kalzium) Chemie ★★★★★ (17) Kostenlos			

350 Elemente verfügbar

Software

Softwarepakete

- Installation aus dem Repository der Distribution
- mehrere tausend Pakete direkt installieren
- Büro, Grafik, Internet, Multimedia, Spiele
- Programmiersprachen, Wissenschaft, Virtualisierung
- Schaltungssimulation, Schaltpläne & Layout
- und natürlich Software für Amateurfunk

Software

Softwarepakete

- Log-Programme
- Digitale Betriebsarten
- Lehrprogramme für z.B. CW
- Schaltungssimulation, CAD, Layout
- Programmiersprachen

Software für Amateurfunk - CQRLOG

CQRLOG

DL7BJ @ tesla - Linux 3.13.0-39-generic

UTC 12:04:02 LT 13:04:02
Do, 2014-11-06 Do, 2014-11-06

New QSO ... (CQRLOG for Linux), database: Log 001

CQRLOG for Linux 2014-11-06 12:04:03

QSO in log: 132 DXCC: 24 DXCC CFM: 3

qsodate	time_on	callsign	freq	mode	rst_s	rst_r	name	qth	qsl_s	qsl_r
1999-09-19	19:01	DL6BE	3.5200	CW	599	599	VOLKERT	DIEHLO		
1999-09-11	20:25	UT2QA	14.0250	CW	589	579	PETRO	BERDYANSK		
1999-09-04	15:55	DL5IAH	7.0200	CW	579	599	JOERG	HINTERWEIDEN		
1999-09-04	15:42	OZ7R/P	7.0200	CW	559	599	FINN			
1999-09-04	15:12	DL2ZN	7.0200	CW	599	599	ANDREAS	ERFURT		
1999-09-04	15:04	DL9EE	7.0200	CW	579	599	HOLGER			
1999-09-04	14:36	DL8KWS	7.0200	CW	579	599	FRANK	RÖSTOCK		
1999-09-03	19:48	OK1FMG	10.1000	CW	599	599	SLAVEK	RAKOVNIK		
1999-09-02	19:44	I21CQN	10.1000	CW	579	579	ENZO	TORINO	B	Q
1999-08-31	19:02	DL1AH	10.1000	CW	559	559	KAH-UWE	VISSELHÖVEDE		
1999-08-24	21:35	DL1AH	144.2800	SSB	59	59	KAH-UWE			
1999-08-11	16:51	DG5TR/P	144.2800	SSB	59	59	THORALF			
1999-08-10	20:23	G0NXA	10.1000	CW	579	589	GILES			
1999-08-03	21:25	S57OJS	10.1000	CW	579	599	JOZE			
1999-08-02	22:10	DG5JPL	144.2800	SSB	57	55	JENS			
1999-08-01	20:38	SV1DKR	10.1000	CW	559	559	IOANNIS			

Comment for QSO: Q5_S date:
Award: Q5_R date:

New QSO View QSO Edit QSO

2014-11-06 Ver. 1.8.2

Grayline

Disconnected

DB0SUE Select D

DL7BJ

Hello Tom, this is DB0SUE-7 in Kiel running DXSpider V1.55 build 0.136 Cluster: 376 nodes, 228 local / 4743 total DL7BJ de DB0SUE-7 6-Nov-2014 1203Z dxspidr WCY de DK8WCY-2 <12> : K=2 expK=0 A=15 R=1

Command:

Software für Amateurfunk - fldigi

The screenshot displays the fldigi software interface. The main window is titled "fldigi - DL7BJ" and shows a digital mode transmission. The frequency is 14070.893 MHz, and the call sign is 14070.156. The transmission text is:

```
s. AttEaaf skt a laeio aeest aeiti ie a n o psaeinto  
eom+eDoce eet fn c tE<DC2>ae lea ae e o z olC) one en  
ltnat n on ec,t'pe h at n tooS o t<G5>be9m ee s<FF>hrw ltr j  
ewt - e oto dtet F E L toe i,g e iet e ontttda it o oo F0#o T o  
ttoo0 e<ETX> i e p u Cd nh.e<DC2>o hifohple if o so e. eeo ta n a eD e  
e  
ez enee  
ote ee- U eo aior tte h tesototo tVi e eo-ev l TA inSte . -e Te <US>e o  
(N .Se  
eh t teenntt o c t oeeuull teaetit  
  
c ii eeeanfl<BEL> tL; aD $\\l eohreidit o pnoe Aoe tE6o  
et-  
eel . o  
is t
```

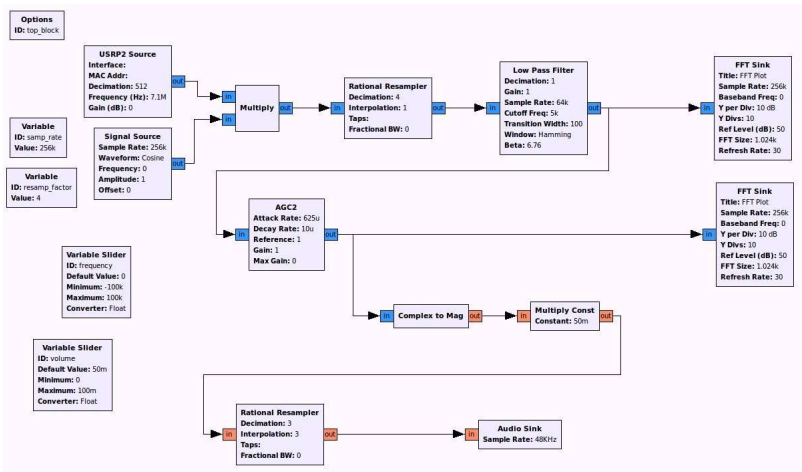
The interface includes a menu bar (Datei, Betriebsart, Konfiguration, Ansicht, Logbuch, Hilfe), a toolbar with buttons for Spot, RxD, TxD, and TUNE, and a control panel with fields for Hamlib, Freq, On/Off, Aus, Ein, Call, Op, Az, USB, QTH, St, Pr, and Loc. A status bar at the bottom shows "BPSK31" and "sm 0 dB | lmd -30 dB".

On the right side, there is a system status panel for "DL7BJ g tesla - Linux 3.13.0-39-generic". It displays system information such as UTC and LT times, mission time, mission load, CPU usage, RAM usage, swap usage, processes, networking, file systems, temperatures, IP addresses, and a process list.

Process	PID	CPU%	MEM%
More	1983	36.08	6.56
fldigi	2259	12.89	1.17
compiz	4382	8.25	0.78
conky	2327	2.86	0.33
gnome-screensho	11144	1.55	0.24
kworke/1:2	7392	1.83	0.88
kworke/rao	2798	1.83	0.18
rcuex/1:1:1:1:1	2698	1.83	0.23
rcu. schweic	2972	1.83	0.38

At the bottom of the interface, there is a spectrum display showing a digital signal with a frequency scale from 70 to 743 kHz. The display includes various control buttons for frequency and mode selection.

Software für Amateurfunk - GNU Radio



http://www.dl8rds.de/index.php/GNURadio_and_USRP2

Software für Amateurfunk - CW Trainer

tom@tesla: ~

Callsign: **DL7BJ** Score: 13386
Speed: 180 CpM/ 36 WpM, Max: 170/ 34

Toplist

YT6W	202472
HA8KW	148892
DL4UNY	145549
H6ZBA	108647
SV2KBS	98758
Y11BX	97934
DK2RO	93118
N06N	92833
LB1GB	92768
DL4DZ	92702
HB9DHG	90650
DF6FR	90337
OH1FJV	88986
AK7V	86857
S37N	85793
OM4KLG	84027
DL4WAP	83606
ZL2BSJ	83537
DL1KSE	80278
K06U	79857

E063X A R A B E0
RU3QW Rv3QW

11/50 INS

Morse Runner: Tom, DL7BJ

File Run Send Settings Help

UTC	Call	Recv	Sent	Score	Chk
00:00:39	JA3IG	599 0001	599 0001	55	
00:01:07	K1UQE	599 0002	599 0002	59	
00:01:45	K3BR	599 0002	599 0003	47	
00:02:08	S53F	599 0002	599 0004	45	
00:02:31	CT3HF	599 0001	599 0005	55	
00:02:51	N4RXF	599 0002	599 0006	55	
00:03:07	OK2BXU	599 0004	599 0007	77	
00:03:47	I20CKS	599 0001	599 0008	69	
00:04:08	K89ZM	599 0010	599 0009	65	
00:04:57	F6BBO	599 0002	599 0010	61	
00:05:44	TM3V	599 0001	599 0011	45	
00:06:16	DB5WF	599 0001	599 0012	55	
00:06:53	K1LGM	599 0006	599 0013	63	
00:07:20	JH3EDG	599 0013	599 0014	65	

Station
Call: DL7BJ QSK

CW Speed: 30 WPM

CW Pitch: 600 Hz

RX Bandwidth: 600 Hz

Mon. Level: [Slider]

Band Conditions:
 QRM Filter Activity
 QRM LID's
 QSB

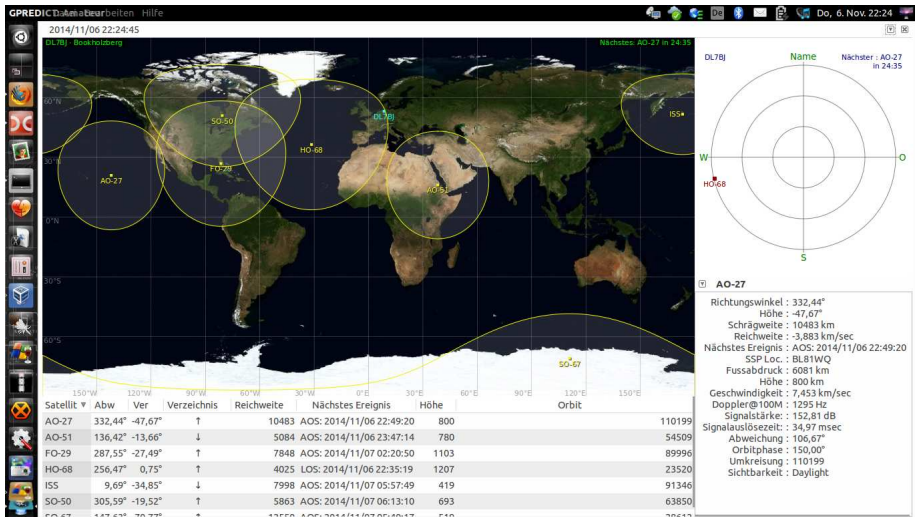
Run for 10 min.

Call: RST Nr. HST 100 qso/hr. 00:07:32

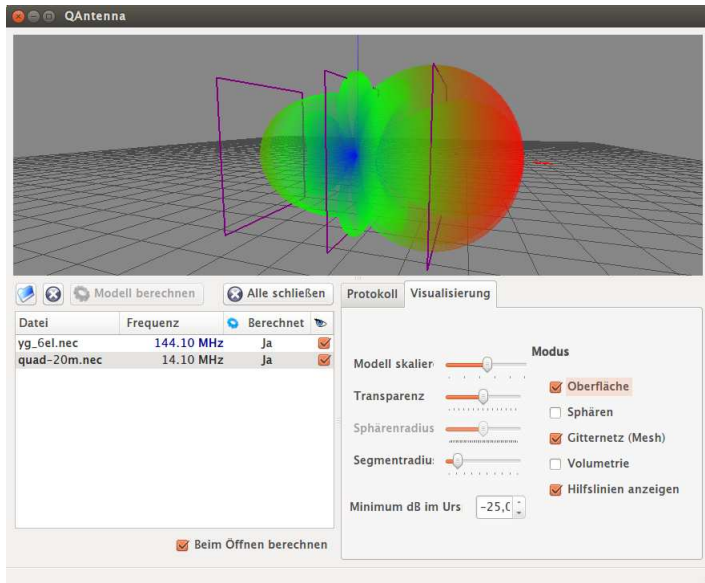
F1 CQ F2 cH F3 TU F4 cng
F5 cno F6 BH F7 ? F8 NIL

816

Software für Amateurfunk - Satellitenverfolgung



Software für Amateurfunk - Antennensimulation



QAntenna

Modell berechnen Alle schließen

Datei	Frequenz	Berechnet	
yg_6el.nec	144.10 MHz	Ja	<input checked="" type="checkbox"/>
quad-20m.nec	14.10 MHz	Ja	<input checked="" type="checkbox"/>

Beim Öffnen berechnen

Protokoll **Visualisierung**

Modus

Modell skalier:

Transparenz:

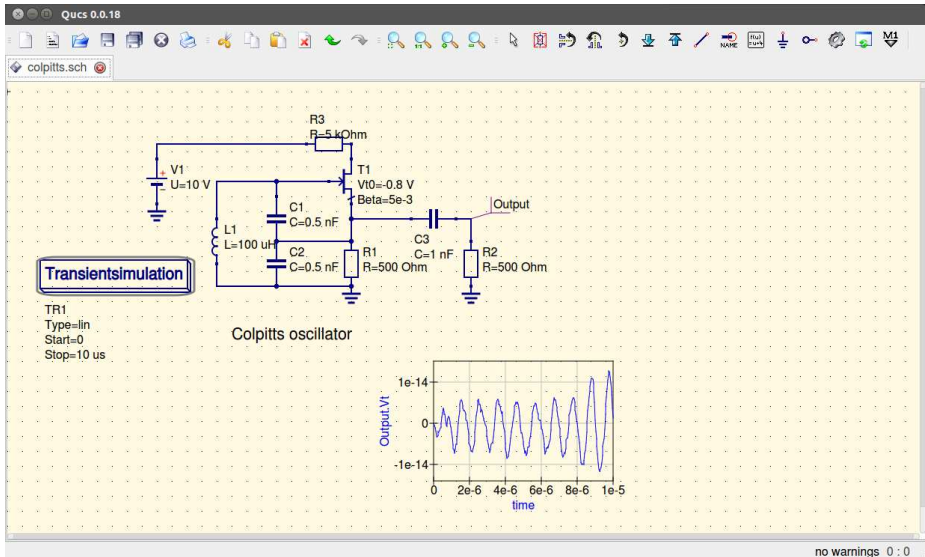
Sphärenradius:

Segmentradius:

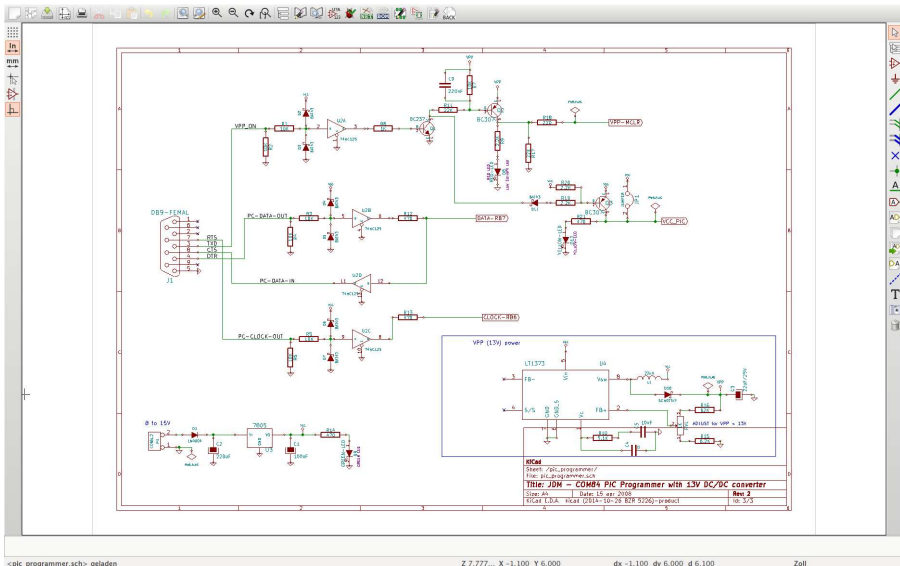
Minimum dB im Urs:

- Oberfläche
- Sphären
- Gitternetz (Mesh)
- Volumetrie
- Hilfslinien anzeigen

Software für Amateurfunk - Schaltungssimulation



Software für Amateurfunk - Schaltpläne mit KiCad



<pic_programmer.sch> geladen

Z 7,777... X -1,100 Y 6,000

dx -1,100 dy 6,000 d 6,100

Zoll

Software

Programmiersprachen

- C und C++
- C für AVR Mikrocontroller
- Freepascal/Lazarus
- Python

Software für Amateurfunk

The screenshot shows the Ubuntu Software Center interface. At the top, there are navigation icons for 'Alle Anwendungen', 'Installiert', 'Verlauf', and 'Fortschritt'. The main title is 'Microsoft Windows Compatibility Layer (meta-package)' for 'wine', with a 5-star rating and '(60 Bewertungen)'. A green checkmark indicates the software is 'Installiert', with an 'Entfernen' button to the right. The description states: 'Wine ist eine Kompatibilitätsschicht, um Windows-Anwendungen unter Linux auszuführen. Die Anwendungen laufen mit voller Geschwindigkeit, ohne eine CPU-Emulation zu benötigen. Wine erfordert kein Microsoft Windows, es kann jedoch dessen System-eigenen DLL-Dateien anstelle seiner eigenen benutzen, falls diese verfügbar sind.' Below this, it says 'This meta-package always depends on the default version of Wine.' and provides a link to the 'Entwicklerwebseite'. A preview image shows a Windows-style desktop environment with a file manager, a terminal window, and a calculator. At the bottom, the version is 'wine 1:1.6.2-0ubuntu4' and the size is 'Gesamtgröße 21,5 kB auf der Festplatte'.

Ubuntu Software-Center

Alle Anwendungen | Installiert | Verlauf | Fortschritt

Microsoft Windows Compatibility Layer (meta-package)

wine
★★★★★ (60 Bewertungen)

Installiert Entfernen

Wine ist eine Kompatibilitätsschicht, um Windows-Anwendungen unter Linux auszuführen. Die Anwendungen laufen mit voller Geschwindigkeit, ohne eine CPU-Emulation zu benötigen. Wine erfordert kein Microsoft Windows, es kann jedoch dessen System-eigenen DLL-Dateien anstelle seiner eigenen benutzen, falls diese verfügbar sind.

This meta-package always depends on the default version of Wine.

[Entwicklerwebseite](#)

Version wine 1:1.6.2-0ubuntu4
Gesamtgröße 21,5 kB auf der Festplatte

Software für Amateurfunk mit Wine

UcxLog 7.42 - DL7BJ - DL7BJ

QSO Contest QSL View Scan Windows Network Settings Update Help Exit

Country: [] Loc: [] IOTA: []

Cont: [] ITU: [] DO: []

1.8 3.5 7 10 14 18 21 24 28 50

Nov 6, 2014 13:49 UTC Loaded QSOs: 140 Sorting members ... Network: Stand-alone

QSO Work - DL7BJ - DL7BJ

New QSO Expedition

Date: Nov 6, 2014 13:49 UTC Band: 14037 kHz Mode: CW

Call sign: [] RST sent: 599 RST rcvd: 599

Name: [] QTH: []

IOTA: [] District/State: [] Locator: [] Manager: []

Last logged 2014

Date	Time	UTC	Band	Mode	Call	Country	Operator
Aug 21	14:37	OK2CQR	1.8	CW	599	599	Czech Republic - PETR JN89CE
Aug 21	14:41	DL1VHP	14010	CW	599	599	Fed. Rep. of Germany - EU-128
Aug 21	14:41	HG8SDS	7024	CW	599	599	Hungary -
Aug 21	14:41	HARDP	7033	CW	599	599	Hungary -
Aug 21	14:41	DL0RF	14070.8	PSK31	599	599	Fed. Rep. of Germany - JNSRPS
Aug 21	14:41	4WIRETT	14024	CW	599	599	Timor - Leste
Aug 21	19:44	HARDP	7007.5	CW	599	599	Hungary -

DX Cluster

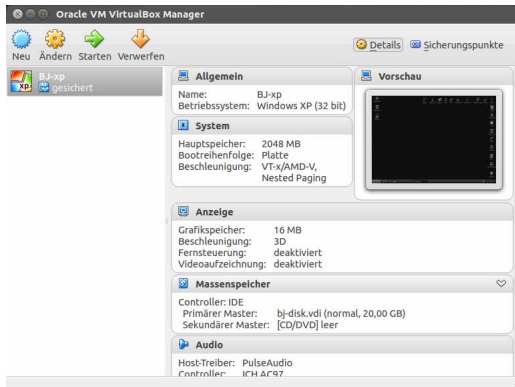
Call Sign	Freq	Country	Operator
1211 OH4MDY	18124.0	Finland	<GW1PKM
1212 3V8SO	14283.0	Tunisia	<CT4DK
1214 3B9FR	28496.0	Rodriguez I.	<PQ4DK
1214 3V9Q	14283.0	Tunisia	<OE70X-T
1214 VK2PH	21269.9	Australia	<PA5WK
1215 ES1QK/5	14295.1	Estonia	<IT9BI
1215 Iw7DKS	28495.0	Italy	<ON4E2U
1216 EA4FTV	7080.0	Spain	<EA5ER
1216 IK1NFF	7090.0	Italy	<IN3ADF
1216 Iw7DKS	28495.0	Italy	<ON4E2U
1217 3V8Q	14283.0	Tunisia	<G2WJUC
1217 VR2-MT	28492.0	Hong Kong	<PD1ATH
1217 VK2PH	21269.9	Australia	<OK2MI
1217 3B9FR	28496.0	Rodriguez I.	<SP5BGG
1218 LY3BV	14241.8	Lithuania	<OE7LV
1219 LY3BV/P	14242.0	Lithuania	<9A4FM
1219 VR2-MT	28492.0	Hong Kong	<E19F
1220 LY3BV	14242.0	Lithuania	<IW1DQS
1221 VR2-MT	28492.0	Hong Kong	<OD0UM
1222 ES1QK/5	14295.1	Estonia	<M34BB
1222 IY4LS	28477.9	Corsica	<R7FO
1222 EHN5NSM	14208.0	Spain	<EA5GUQ
1223 EA4FTV	7080.0	Spain	<EA46JP
1223 HATEM	29580.0	Hungary	<ON4E2U
1223 EA1BAU	7075.0	Spain	<EA46JP

Software für Amateurfunk mit Wine

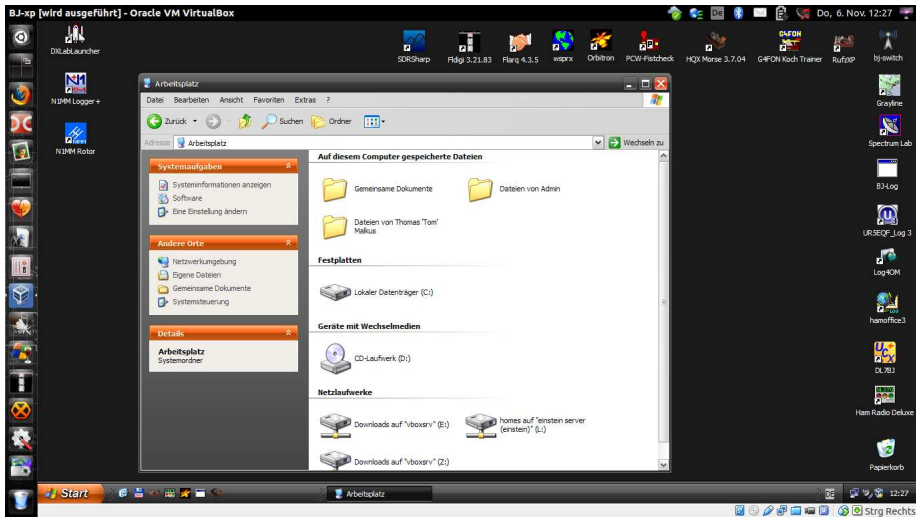
The screenshot displays a software application window titled "Bildschirmfoto" (Screenshot) running on a Linux desktop. The application interface includes a menu bar (File, View, Map, Tools, Help), a toolbar with icons for Prefiles, Cities, Islands, Rectangular, Azimuthal, and Globe, and a main map area showing a world map with a grid. A red crosshair is positioned over the call sign "CE" in South America. On the left side, there is a list of call signs and their corresponding prefixes, with "CE" selected. The status bar at the bottom shows coordinates (52°42' S, 67°00' W), speed (FD67mh), distance (225°, 13702 km), and time (08:37 - 23:46 UTC). The desktop background shows a taskbar with various application icons and a system tray with the date "Do, 6. Nov. 12:22" and a digital clock.

Teritory	Prefix
<Unassigned prefix>	00
Abu Ai Is.	A1
Afghanistan	T6
Agalega & St. Brandon	3S6
Alaska Is.	OH0
Alaska	KL
Albania	ZA
Aldabra	VO9
Algeria	7X
American Samoa	KH8
Amsterdam & St. Paul Is.	FT#Z
Andaman & Nicobar Is.	VU4
Andorra	C3
Angola	D2
Anguilla	VP2E
Antarctica	CE9
Antigua & Barbuda	V2
Argentina	LU
Buenos Aires Prov.	LU0D
Catamarca	LU0R
Chaco	LU0GA
Chubut	LU0FV
Cordoba	LU0H
Corrientes	LU0ML
Entre Rios	LU0J
Formosa	LU0GP
General (1KW) or Super...	LU#...
Initial category (50W)	AZ
Jujuy	LU0T
La Pampa	LU0U
La Rioja	LU0S
Mendoza	LU0M
Misiones	LU0I
Neuquen	LU0Y
Rio Negro	LU0V
Salta	LU0Q
T... ..	LU0N

Windows XP unter Linux



Windows XP unter Linux



Zusammenfassung

- kostenloses Betriebssystem
- kostenlose Software
- viele wissenschaftliche & technische Anwendungen
- viele Programmiersprachen
- läuft auf vielen Systemen und Prozessoren
- ideales System für technische & wissenschaftliche Experimente

Linux ausprobieren

Download und Installation

- Ubuntu 14.04 LTS - Download von <http://www.ubuntu.com>
- Erstellen einer Boot-CD oder eines USB Sticks zum Booten mit <http://unetbootin.sourceforge.net/>
- von CD oder USB Stick ausführbar zum Testen
- keine Installation nötig, kein Zugriff auf die Festplatte

QRT



Sind noch Fragen? Sonst melde ich QRT an ...