Medlemsblad for Dansk UNIX-system Bruger Gruppe

DKUUG NYT

Nr 16, september 1988

Hermed et temmeligt fyldigt nummer af DKUUG-nyt. Vi har fået endnu et telefonnummer samt telefontid, en ny markedsoversigt er på vej, og der er 3 møder inden for den nærmeste måned.

Møderne er om netværk d 28 september, om UNIX standardisering den 15. september (allerede særskilt annonceret ved særligt brev) samt EUUG konferencen i Lissabon, Portugal 3. - 7. oktober.

Vi har fået Jørn Møller Nielsen fra DDE til at fortælle lidt om hvad han fik ud af vores medlemsmøde 4. maj, så I alle kan se hvad I gik glip af! Kim Storm fortæller om nettets status, der er meget nyt.

Så har jeg sakset en række artikler fra nettet. Forskellene på UNIX standardiseringsområdet mellem SVID og POSIX beskrives. Der er en oversigt over AIX, som jo danner grundlaget for OSFs UNIX-produkt. Vi har en sammenligning mellem RCS og SCCS, der bruges til versionskontrol af større programmelsystemer mv. GNUs udestående opgaver listes (og de mangler frivillige til at lave dem!). Der er en artikel om en psykologisk virkning af nettet. Jeg har sakset en dansk artikel om hexadecimale tal på dansk, og rosinen i pølseenden er et program, der skal læses som tekst.

Vi har vedlagt bestillingslisten samt en supplementsliste af medlemmer, og et produktoplysningsskema er også vedlagt.

God læselyst!
Den gl. redacteur

DKUUG får nyt telefonnummer samt telefontid

DKUUGs sekretariat har fået sin egen telefon og telefontid:

01 60 66 80   ma,ti,to 11 - 12

Det vil normalt være Mogens Buhelts kone Inge Buhelt, der er at træffe på telefonen. Ellers vil man kunne lægge en besked på telefonsvareren.

Ny udgave af DKUUGs danske UNIX markedsoversigt

DKUUG er i disse dage ved at indhente oplysninger til den anden reviderede udgave af den danske markedsoversigt over UNIX produkter. Der er udsendt særskilte breve med anmodning om oplysninger, men der er også vedlagt et skema i dette blad. Ultimativ deadline er fredag den 16. september med morgenposten.

Det er gratis at blive optaget i markedsoversigen, også for ikke-medlemmer. Dette er vores politik, da vi ønsker at den skal være så dækkende som muligt. Markedsoversigten kan forudbestilles, den koster kr 50,- per stk. Dette kan enten ske på oplysningsskemaet, eller på bestillingssedlen bagest i bladet.

Seminar om netværk i Danmark

DKUUG arrangerer i samarbejde med UNI-C og R&D MHS-nettet et møde den 28. september. Mødet har følgende program:

Deltagere
Alle, som er interesserede i brug, udvikling og sammenkobling af avancerede edb-net, specielt i forsknings- og uddannelsessektoren.

Indhold
Der har i nogen tid været et samarbejde mellem de danske parter i tre internationale net, nemlig UNIX-nettet EUNET, det VM baserede net EARN og Nordunets eksperimentelle X.400 net R&D MHS. En arbejdsgruppe har etableret muligheder for udveksling af elektronisk post mellem de tre net via såkaldte 'gateways' og diskuteret de praktiske muligheder for at benytte OSI-standarder.

Gruppen indbyder til dette seminar for at orientere brugere og andre interesserede om status og planer for de tre net. Desuden gennemgås andre netværksaktiviteter i forsknings- og uddannelsessektoren, nemlig sammenkobling af ethernet på universiteter og forskningscentre i Danmark (DEnet) og i norden (NORDUnet) samt en ny gateway for forskningssektoren (Danpost), udviklet i samarbejde mellem teleselskaberne, Nordunet og UNI-C.

Program
1. Indledning - mødets formål og baggrund (F. Greisen)
2. OSI-teori (K. Hansen)
3. OSI-aktiviteter, RARE, COSINE og Nordunet (P. Villemoes)
4. EUNET - organisation, teknik og service (I. Korn)
5. EARN - organisation, teknik og service (F. Greisen)
6. R&D MHS - organisation, teknik og service (J. Houmann)
7. DENET og NORDUnet - status og planer (J. P. Sorensen)
8. Danpost (E. Bertelsen)
9. Diskussion (panel)

Tid og sted
Onsdag den 28. september kl. 13-17 i auditorium up1, Universitetsparken 1, København.

Tilmelding
Senest den 16.9 til Eva Lisgård, UNI-Cs kursusadministration, Vermundsgade 5, 2100 Ø, tlf. 01 82 83 55.

Pris
100,- kr, som bedes indbetalt på UNI-Cs girokonto 237 3319 eller med check vedlagt tilmeldingen.

DKUUG møde om UNIX standardisering 15. september

Den 15. september 1988 på Hotel Scandinavia, H.C Andersens Boulevard, 2300 København S afholder foreningen et møde om standardiseringsarbejdet i UNIX-verdenen. Mødet er åbent for alle. Af praktiske grunde er tilmelding nødvendig.

10.00 - 10.15   Registrering.

10.15 - 11.00   Standardisering generelt v/ Isak Korn, ITC.
Formanden for underudvalget for standardiseringen af operativ-systemer og programmeringssprog samt database-sprog, grafikken og software-metodikker under Dansk Standardiseringsråd vil i sit indlæg fortælle om de aktiviteter, der finder sted for at definere det totale portable miljø samt sammenhængen mellem de internationale standarder, som udarbejdes i ISO's regi og deres indflydelse på de europæiske standarder, der udarbejdes/adopteres af CEN/CENELEC som EV eller ENV'er.

11.00 - 11.45   X/Open - generelt v/ John Totman, X/Open Ltd.
John Totman er ansvarlig for implementeringen af X/Open marketingsaktiviteter i Europa. I sit indlæg vil foredragsholderen fortælle om de strategier og aktiviteter, som X/Open har etableret mht. den praktiske opbygning af et standardiseret miljø.

11.45 - 12.15   X/Open - i Danmark v/ Peter Mikkelsen, NCR.
Foredragsholderen vil belyse de aktiviteter som X/Open har etableret mht. definitionen af Common Application Environment, som indtil videre er de facto standard indenfor UNIX-miljøet. Endvidere vil samarbejdet mellem X/Open-medlemmerne blive belyst.

12.15 - 13.15   Frokost.

13.15 - 14.00   OSF v/ Henning Oldenburg, OSF.
OSF er det sidste skud på stammen af sammenslutninger, som blandt sine formål prøver at definere sammenkobling og portabilitet mellem systemer fra forskellige leverandører, og samtidig den organisation, der har skabt 'røre' i de eksisterende miljøer. Vi får forklaring på og belysning af bevægelsesgrundene for OSF.

14.00 - 14.45   POSIX v/ Claus Tøndering, DDE.
Formanden for den danske gruppe (under Dansk Standardiseringsråd), som deltager i den internationale standardisering af bl.a. POSIX og "C", vil her fortælle om de projekter, som ISO har sat i gang i forbindelse med standardiseringen af ovennævnte områder, samt om den danske stillingtagen til disse projekter.

14.45 - 15.15   Kaffe.

15.15 - 16.00   Det offentliges behov for standarder v/ Peter Cordsen, DC.
I 1992 træder den store harmonisering indenfor EF i kraft, bedre kendt som det indre marked. Hermed opstår der behov for at synkronisere fællesskabets sæt af standarder, som vil gøre sig gældende ved de offentlige indkøb af IT-udstyr. Taleren vil komme ind på og give eksempler på, hvordan man i den store verden bl.a. USA har lavet et sæt af regler, som harmoniserer indkøb af IT-udstyr til brug i offentlig administration (FIPS).

Prisen, der inkluderer frokost og kaffe, er for medlemmer kr. 200,- og for ikke-medlemmer kr. 600,-. Faktura vil blive tilsendt.

Tilmeldingskupon til mødet d. 15. september 1988
Navn: _____   Telefon: _____
Firma: _____   (Sæt kryds:)
Adresse: _____   Medlem: ___
_____   Ikke-medlem: ___

Indsendes til: DKUUG, c/o Mogens Buhelt, Kabbelejevej 27 B, 2700 Brønshøj.

Praktisk om EUUG konferencen i Portugal, samt program

Af Neil Todd (neil@ist.CO.UK)

If you have not seen a booking form for the conference, please contact Owles Hall:

> Helen Gibbons
> EUUG Secretariat,
> Owles Hall,
> Buntingford,
> Herts SG9 9PL
> England
> Phone: +44 763 73039 (Answering service out of office hours)
> email: euug@inset.uucp
> Fax: +44 763 73255

The last date for booking is September 26th, and a cost reduction may be obtained by booking before 22nd August.

Remember that EUUG now accepts VISA credit cards (we are working on ACCESS/MASTERCARD/EUROCARD) so all you have to do is pick up the

The remainder of this news item consists of a 'How to get there' written from personal experience by Neil Todd and finally details of the latest conference programme.

How to get to the Hotel Estoril-Sol from Lisbon Airport

You have two choices: taxi or public transport. A taxi is faster but much more expensive, make sure that you negotiate the fare before you start as the journey will take you outside the Lisbon City Limits.

Using public transport is a bit more difficult, but presents no real problems. Take either a 44 or 45 bus to "Cais do Sodre" station (its the end of the route, so you don't need to worry about when to get out), the bus will probably have "C Sodre" on its destination board. You might feel like taking a taxi on this leg of the journey, its completely within Lisbon city limits so there is no need to negotiate. Beware of the faster Linha Verde bus, this with leave you at the wrong station.

At the station catch a train to Cascais (end of the line), there are fast trains every 20 mins during the day, every 30-40 mins during early morning and late evening. The journey should take about 30-40mins. The train destinations are clearly displayed on T.V. screens near the platforms. Trains run until about 02:30 and start again at about 05:00.

At Cascais take a taxi to the hotel (about 1km). There is a closer station, but you will have a lot of stairs and a busy road to cross.

If you have any doubts, there is a tourist information office at the Airport who will be glad to help. Car hire is reasonably priced (although petrol isn't), all the major chains have offices at the Airport. You probably can get a good discount by booking in advance with your local travel agent, failing that the In flight magazine on your plane may well contain discount vouchers.

Finally a word about fares, you should aim to book as early as possible as seats are going fast, most airlines offer discounts for early booking. Ask about Pex and SuperPex fares.

Programme for the conference.

Monday 3rd October - Tutorials

M1   Users Introductions to the X Window System
       Watson, Clenton & Caruthers

M2   POSIX Implementation

Shane P. McCarron & John Quarterman

M3   Curses
Prof. Axel Schreiner

Tuesday 4th October - Tutorials

T4   Programming with the X Window System
Watson, Clenton & Caruthers

T5   Sendmail
Forrest Smoot Carl-Mitchell

T6   System Performance & Management
Brian E.J. Clark

Wednesday 5th October - Technical sessions

Operating Systems   *I*

CHORUS, a New Technology for Building UNIX Systems
Franc,ois Armand, Fre'de'ric Herrmann, Michel Gien & Marc
Rozier; Chorus syste'mes, France

ANSA - Can big be made beautiful?
Peter Pearson; ANSA, UK

Clouds - A distributed, Object-Oriented Operating
System: Architecture and Kernel Implementation
J.Bernabeau, Y.A.Khalidi, M.Ahamad, W.F.Appelbe,
P.Dasgupta, R.J.LeBlanc & U.Ramachandran; Georgia
Institute of Technology, USA

Implementing a POSIX Compatible operating system on a
multi-transputer supercomputer
Paul J. King; Real Time Systems Ltd, UK

Security

Securing Unix
Philip Martin; Gould Electronics, UK

Network Services in the Athena Environment
Jennifer Steiner & Daniel E. Geer, Jr.; Project Athena,
MIT, USA

Secure the Superuser
M. Benakli; Universite' P et M Curie, France

Locking in NFS

Implementation of a Locking Protocol for Resource
`Locking in a Stateless Environment
Peter Gloor, Rudolf Marty & Marin Zellweger;
Universitaet Zuerich, Switzerland

File systems

The Translucent File Service
David Hendricks; Sun Microsystems, Inc., USA

An Object Base for Attributed Software Objects
Andreas Lampen & Axel Mahler; Technische Universitaet
Berlin, West Germany

EUnet

OSI transition plans of EUnet and other interesting
developments
Daniel Karrenberg; CWI, Netherlands

Thursday 6th October - Technical sessions

Standards, proving and modelling

Precise Standards through Formal Specifications: A Case
Study: the UNIX File System
O.Declerfayt, B.Demeuse, F.Wautier, P.Y.Schobbens &
E.Milgrom; Universite' Catholique de Louvain, Belgium

Modelling UNIX with an Object Oriented Model
C.Fernandez; Universite' P. et M. Curie, France

Establishing a Harmonised Testing Service for POSIX
Jon Leigh; The National Computing Centre Ltd, UK

Object Oriented Window Systems

IMAGES - An approach to an Object Oriented UIMS
J.A.Marques, L.P.Simoes, N.Guimaraes, L.Carric,o &
M.Sequeira; Inesc, Portugal

ET++ - An Object Oriented Application Framework in C++
Erich Gamma, Andre' Weinand & Rudolf Marty; Universitaet
Zuerich, Switzerland

CommonView, a windows library in C++
Alan Sloan; Glockenspiel, Ireland

Distributed Operating Systems

Implementation of an object-oriented distributed system
architecture on Unix
D.Decouchant, A.Duda, A.Freyssinet+, M.Riveill,
X.Rousset de Pina, G.Vandome+ & R.Scioville;
Laboratoire de Genie Informatique, +Centre de Recherche
Bull, France

Real time issues

Real Time multiprocessing under UNIX
Peter L. Petersen; Aalborg University, Denmark

Priority and Deadline Scheduling on Real-Time UNIX
Peter Bond; Ferranti Computer Systems Ltd, UK

Office Automation

Eolas - The implementation of an Office Information Server
Mark Sheppard, Ann Barry, Brian Caulfield, Sean Baker,
Janet Dillon, Marysia Cahill

Optical discs

Optical discs

An implementation of optical disk worm file system
under System V.3
C.Falchi; I.A.N. s.r.1, Italy

NOFS - the NFS server for the Optical File System
Paulo Amaral; GIPSI SM90, France

Friday 7th October - Technical sessions

Documentation and administration

Installation Documentation Documentation
Linda Branagan & David Tilbrook; Carnegie Mellon
University, USA

Sacrifices to Ra or Learning to administer a Sun
Network
Bubbette McLeod; Silicon Compiler Systems, USA

Internationalisation

The Arabisation of UNIX
Pascal Beyls; Bull, France

Tools for workstations

NeWS and X, Beauty and the Beast?
W.T.Roberts, A.Davison, K.Drake, C.Hyde & M.Slater;
Queen Mary College, UK

Direct Manipulation Tools for UNIX Workstations
John Bovey & Mark Russell; University of Kent, UK

Developing and Adapting UNIX Tools for Workstations
David Barnes, Mark Russell & Mark Wheadon; University
of Kent, UK

Multiprocessors

Distributed Light Weight Processes in MOS
Dalia Malki Hebrew University of Jerusalem, Israel

Hardware and Software Aspects of Symmetrical Unix
Multi-Processors
Ali Shirnia & Brian E.J. Clark; Pyramid Technology SA,
Switzerland

The programme is scheduled to finish at 3.30pm on the Friday.

Hope to see you there....

Indtryk fra DKUUGs medlemsmøde om operativsystemer

Af Jørn Møller-Nielsen, DDE (jmn@dde.dk)

Medlemsmødet holdtes 4. maj 1988 kl. 13.00 på Københavns Universitet, Amager og handlede om operativsystemer.

1. Velkomst og indledning ved Keld Simonsen, DKUUG

2. UNIX eller OS/2 ? - Tue Bertelsen, NCR Danmark A/S

Tue Bertelsen trak først et af de kendte spørgsmål fra UNIX folk frem:

-Hvorfor spilde tid med OS/2, når vi alligevel har UNIX.

Tue fremdrog en række fordele ved OS/2 som han mente var fremtiden bl.a. fordi:

- OS/2 er en enkelt-bruger multi tasking system specielt udviklet til
Office Automation, og et rigtigt flerbruger system i lokalnet (OS/2
LAN Manager).
- OS/2 er designet til ny processor teknologi og er nyudviklet fra
bunden, (UNIX er 15-20 er gammelt)
- OS/2 benytter grafisk brugerinterface a la APPLE (OS/2 Præsentation
Manager) dette er den vigtigste forskel fra UNIX.
- OS/2 er HW og processor uafhængig (men først når styresystemet er
stabilt, det er det ikke i dag.)

Derefter blev principperne i OS/2 gennemgået.

OS/2 løsninger bliver dyrere end MS-DOS løsninger p.g.a. merpris på OS/2 og memory expansion fra 640kb til 2-4Mb.

Konklusion fra Tue: Unix er ikke et alternativ til OS/2 men et supplement.

Der var en del spørgsmål fra salen, bl.a. En del som trak UNIX's 'Præsentations Manager' X (x-window) frem som et væsenligt stærkere værktøj end OS/2's, som Tue mente var den væsenligste grund til at vælge OS/2 frem for UNIX.

3. UNIX + DOS = VP/IX - Erik W. Jeppesen, Regnecentralen A/S

VP/IX er et program, der gør at man kan køre DOS programmer direkte under UNIX på en 80386. Dette gøres ved at emulere Hardware (i modsætning til mange andre som emulerer Operativ System). VP/IX er et fuldt flerbruger system, dette gælder også DOS programmer.

Device emulering løser nogle af følgende problemer:

- Deling af devices, fx. Floppy disk
- Sikkerhed fx. UNIX-login
- Paging/real time konflikt.
    Fysisk og logisk adr. ikke de samme.
- Muliggør portering til ikke AT-hardware.
    Fx. Support af serielle terminaler
- Der er akces til MS-DOS filer fra UNIX.

En gennemgang af hvordan man har løst samspillet mellem UNIX og DOS, herunder device emulering, filsystem integration, support af serielle terminaler og krydseksekvering af programmer.

Der var en række spørgsmål fra salen bl.a.
    - Hvad med PC programlicens. - Brugerne bør være ærlige!
    - Begrænsning i MS-DOS version. - INGEN

- Hvad med hastighed på DOS-programmer. - INGEN forskel (disk
  benchmark hurtigere på VP/IX). 3-4 gange hurtige end på en XT'er.
- Er serielle terminaler gode til at køre DOS applikationer på.
  NEJ, seriel tastetur ikke så godt.

4. Microport UNIX og DOS/Merge - Leif Jensen, Danmos Microsystems

DOS/Merge er et program med samme funktioner som VP/IX. Det kan køre bede på 80286 og 80386 under Micro-
ports UNIX.

Foredraget om MicroPort System V var ret teknisk og havde følgende punkter.
- Oversigt over MicroPort SystemV/AT, System V/386.
- Tekniske betragtninger over DOS-Merge 286/386.
- Spedte bemærkninger.

Det er muligt at blande DOS og UNIX fx. ved brug af shell, pipes og DOS kommandoer. Det er muligt at bruge
UNIX udviklingsværktøjer som 'vi, make' til udvikling af DOS applikationer.

Performance af DOS programmer:
- 80286: ca. + 5%
- 80386: 0 til + 20%
Ved disk akces: fra -100% - +100%

5. Realtids processtyring under UNIX - Delmar Fryd, Hewlett-Packard A/S

Ved hjælp af nogle ekstra operativkald har HP løst problemet med hvorledes man kan lave processtyring under UNIX.
Det gælder om at kunne garantere en bestemt svartid og at et interrupt serviceres inden for et bestemt tidsrum.

Delmar Fryd gennemgik, hvordan det er implementeret hos HP og hvordan det bliver benyttet med HP's specielle
UNIX kald.

Der er lagt stor vægt på at en proces' tidsinterval er forudsigelig, så systemet kan bruges til processtyring.

6. Realtids Transaktionsstyring under UNIX - Wilhelm Rosenquist, NCR Udviklingscenter A/S

Wilhelm Rosenquist startede med at komme med nogle kommentarer til nogle af de andre indlæg:

UNIX's X koncept er meget stærkere end OS/2's Præsentationes Manager p.g.a. at X er født til at arbejde direkte på
LAN, hvorimod PM går gennem en OS/2 til LAN.

En anden måde at beskrive forskelle på DOS og UNIX på:
    V(DOS) = STD.HW
    V(UNIX) = STD.OS

Grunden til at HP og NCR udvikler på deres egen version af UNIX til realtime formål, er at der endnu ikke er nogen
standard. Men der arbejdes på den - IEEE POSIX 1003.4 som muligvis er færdig i 1992.

I det næste blev der mest talt om forskelle mellem HP's og NCR's realtidssystem. som skilte sig ud fra hinanden, ved
at: NCR's er til transaktionsstyret - transaktioner så hurtigt som mulgt. HP's er til processtyring - forudsigelig tid på
proces afvikling.

Som det er set af Jørn Møller-Nielsen (jmn@dde.dk) den 23. maj 1988.

Status for DKnet september 1988

Af Kim Storm, DKnet

Jeg vil i denne artikel berette om de mange nye ting, der er sket og som er ved at ske på DKnet.

Personale

Den væsentligste nyhed for DKnet er at vi langt om længe har fået ansat en fast medarbejder til at tage sig af de kundeorienterede sider af DKnet's drift. Vi byder Claus Engdahl hjertelig velkommen som ny netpasser.

Claus vil tage sig af opkobling af nye knuder, telefonkontakt med brugerne, afhjælpning af problemer, fakturering, osv, dvs. de opgaver, der hidtil er varetaget af Keld Simonsen. Søren Jensen fra DIKU vil (sammen med Claus) fortsat stå for den tekniske drift af dkuug maskinen, men fra den 1. oktober skal problemer af enhver art rapporteres til Claus, da vi har lovet at brugerne ikke kontakter DIKUs medarbejdere direkte.

Claus' telefonnummer er fra 1. oktober 01 39 73 22 (det er telefonsvarer på, når han ikke selv er at træffe), og hans net-adresse er:

    netpasser@dkuug.dk   (dkuug!netpasser)

Derudover er der sket en ændring i styringen af nettet, idet Kim Storm har overtaget posten som ansvarlig for nettet efter Isak Korn, der fortsætter som medlem af netstyringsgruppen.

Fakta om nettet

DKnet har nu 65 mail-knuder og 16 news-knuder med en månedlig trafik gennem dkuug-maskinen på 500 Mbyte.

Vi har danske gateways til EARN/BITNET hos Nordita og til R&D MHS (dunet) hos DIKU. Derudover har vi adgang til de andre internationale net, som fx EUnet, USENET, ARPA, DECNET og CSnet via mcvax i Amsterdam, hvortil vi har direkte forbindelse (via X.25).

Vi er meget tæt på at have etableret direkte forbindelser (via X.25) til alle øvrige nationale netknuder (backbones) på EUnet, og ekspeditionstiderne inden for Europa er nu virkelig gode.

Til USA (via Amsterdam) er der for det meste heller ingen problemer, men for at klare spidsbelastningerne har EUnet besluttet at oprette en fast 64 kbit/s linie til USENET i USA til afløsning for den nuværende 9600 bit/s linie, så vi kan vente en endnu bedre service fra omkring nytår.

Apropos mail til og fra USA, så er den foreløbige rekord "fra afsendelsen af et brev til USA til svaret kom tilbage" på blot 12 minutter.

Nyt materiel

Vi har langt om længe modtaget i alt 3 såkaldte TeleBit TrailBlazer modemer, der er meget interessante, idet de kan køre op mod 18 kbit/s over en almindelig drejet telefonlinie! Ved hjælp af disse modemer regner vi med at nedbringe vores omkostninger til international trafik betragteligt (de har tilsvarende modemer i Amsterdam). Et modem er allerede sat i drift og anvendes til at hente news hjem fra Amsterdam.

De andre modemer anvendes foreløbig til testformål.

Vi arbejder på at få etableret en "introduktionsrabat" på disse modemer for DKUUGs medlemmer, så vi åbner mulighed for at overflytte en del af den indenlandske trafik (især news) til disse modemer.

Vi er i fuld gang med at sætte en ny netmaskine sponseret af Olivetti i drift, hvorpå medlemmer af DKUUG, der ikke har adgang til mail eller news internt, kan få en postboks eller læse nyheder. Desuden skal maskinen yde en arkivservice, hvorfra Public Domain programmel kan hentes af medlemmerne via uucp. Vi regner med at være klar til at lukke op for denne service umiddelbart efter generalforsamlingen i november.

Priser og prispolitik

Det basale princip i DKnets prispolitik er at "det skal løbe rundt", dvs. brugerne af DKnet blot skal betale kostpris for den ydede service. Vi henter vore indtægter på tre mader:

- Oprettelsesafgift (1000 kr. pr service) - Abonnement   (250 kr. pr kvartal pr service) - Trafikafgift   (2-5 øre pr kbyte reel trafik gennem dkuug-maskinen)

Som det ses er trafikafgiften en variabel parameter, idet vi løbende justerer den for at opnå ligevægt i budgettet, fx. var den 5 øre/kbyte i 4. kvartal 1987, 2 øre/kbyte i 1. kvartal 1988 og den vil være 3 øre/kbyte i 2. og 3. kvartal 1988. Med de nye modemer i drift venter vi igen at kunne nedsætte trafikafgiften.

Desuden regner vi meget snart med at kunne hjemtage news fra Sverige i stedet for Holland, hvilket gerne skulle gøre det endnu billigere at være news-knude.

Vi er nu i gang med at lægge budgettet for næste års drift af DKnet, og vi ser positivt på udviklingen.

En sammenligning mellem POSIX og SVID

Af Bob Lenk, HP

Some say that it is much easier to write portable software in SVID than it is to do it in POSIX. POSIX left too many features optional and implementation dependent.

I've heard that a lot, but I have yet to see evidence that it's true. Yes, the words "option" and "implementation defined" appear much more in POSIX than in the SVID. Conversely, the SVID has various "extensions" which are the same as "options". Also, I think that the greatest number of "implementation defined" areas are areas that the SVID simply ignores.

Now, let's go through the explicit options in POSIX Draft 12.3 (since they're fairly easy to find) and see how POSIX and SVID compare as portability aids:

       NGROUPS_MAX (BSD multiple groups)

SVID effectively has this limit set to zero, meaning that it omits a feature. It's straightforward to program portably for any value of this limit. Admittedly it's not quite as simple as programming for a system without the feature, but the additional sophistication should be no problem for the type of application that would be interested. Of course various SVID-conformant system provide ways to get this BSD functionality in some type of non-SVID environment; the SVID-based application just has no way to deal with this.

       _POSIX_JOB_CONTROL

SVID simply doesn't provide the feature. A POSIX application that wants to be job control dumb is similarly unaffected.

       _POSIX_SAVED_IDS (SVID saved-set-user/group ID feature)

This is a case where SVID simply does provide the feature. That does make programming easier (it would also help if SVID and the SysV implementation agreed).

       _POSIX_CHOWN_RESTRICTED (can non-superuser chown files?)

SVID permits arbitrary chown'ing, which does make portable programming easier. On the other hand, too many people think this is a severe security hole to accept it. As a result, there are vendors whose systems conform to SVID except for this (and perhaps one or two other small things). Thus portability is eased in a smaller universe. In reality, a portable program that simply doesn't use chown (under the assumption that it might not work) is no problem to write.

       _POSIX_NO_TRUNC (is too long filename truncated or does it give error?)

This is a rather messy situation to deal with in POSIX. SVID is totally silent on the semantics here. The diversity thus exists there too, but the application has no handle on it at all (as opposed to a clumsy handle in POSIX).

_POSIX_VDISABLE (is there a setting to disable special tty characters?)

SVID takes the side that there is no such special character. This makes portable programming simpler in two cases: (1) where the application wants to set the special character (eg. ERASE) to some bizarre value (like '\377') that the system chose as the disable value, and (2) where the application wants to emulate the line discipline. Conversely, it does not allow disabling the special character function.

I'll also look at two of the most commonly mentioned explicit options from Draft 12, which are now implicit in 12.3 (note that a number of others are no longer options, either explicit or implicit):

_POSIX_DIR_DOTS   (are the . and .. entries visible via readdir()?)

SVID is totally silent on the semantics here. An application can easily be written to ignore these entries if it sees them. POSIX explains this.

_POSIX_GROUP_PARENT (is new file's group from eff. uid of creating   process or group ID of parent directory?)

SVID goes with the effective uid, making things more predictable. A portable POSIX program can always get these semantics by chown'ing the new file after creation, which is a little more work, if it cares.

In conclusion, I don't see that the SVID makes life all that much easier, or that the POSIX options are without justification.

There's a separate argument that SVID covers more. That's very true if you compare it to 1003.1. I doubt it will be true in comparison to the standards eventually covered by the 1003.0 guide. SVID certainly has a head start, and is very useful because of that. Its existence is very useful for the development of 1003.1 and other standards. But SVID is a different animal than POSIX. SVID is a specification of the interface to a specific operating system. While it can be applied both to ports of that system and to separate implementations conforming to the same interface, its heritage is definitely a single implementation. As such, one would expect it to permit less divergence, and to apply to fewer implementations.

En oversigt over AIX

Af Charlie Sauer (sauer@auschs.UUCP)

The AIX Family Definition Overview, published in July, includes a matrix listing system calls, library routines and user commands. For each item there is an indication of whether it is present in the first release of AIX PS/2, the 2.2.1 release of AIX/RT, the first release of AIX 370, the AIX Family (some AIX products will have additional items not in the family), POSIX, SVID and BSD 4.3.

Since a future version of AIX will be core technology for the OSF products, I think it is useful to summarize publicly announced AIX facts and status. I am speaking for AIX, not the OSF, and I am not going to talk about the unannounced plans for AIX. Several of us in Austin have disclosed AIX technology in development to the OSF seed team, and I expect that OSF will announce OSF plans with respect to AIX technology when appropriate.

AIX on the RT is now in it's fifth release, known as AIX 2.2, which is officially available on June 24. Another release on the RT (2.2.1) and AIX PS/2 are scheduled for September availability, and AIX/370 is scheduled for March availability.

AIX development personnel participate actively in the POSIX committees, and AIX is committed to POSIX compliance.

AIX was originally derived from SVR1 and SVR2. We have endeavored to maintain the functionality in the BA sections of SVID at the SVR2 level. There are some incompatibilities, which I personally consider minor.

Evolutionary compatibility with BSD has been part of AIX development starting with the initial release. An abstract on 4.3 convergence is being posted separately.

AIX also includes many components from vendors, from other universities, and from IBM development and research.

There is a recent overview paper on AIX[1], but I will list a few of the areas where we have focused development and research effort:

virtual memory management and mapped files. The AIX/RT pager is derived from work originally done in the CP.R project at IBM Watson Research Center.

services for managing "real time" devices and applications.

optimizing compiler technology based on the 801 project at IBM Research[2] and related technology, e.g., the dynamic binding code used for device handlers.

internationalization.

integrating SNA and related communications products with Unix.

distributed system support[3].

It is our plan that AIX be consistent in both interfaces and actual source code base across the 386, RISC and 370 platforms. (There are some areas where consistency is not achievable due to hardware differences, e.g., IEEE floating point vs. 370 floating point. Given resource and schedule pragmatics, there will be functions not present in particular platforms in particular releases.) The AIX Family Definition Overview, to be published next month, summarizes the system call interfaces, library routines and commands which are common across the AIX Family. This includes the BSD compatibility described in the accompanying abstract, X11, NFS, Distributed Services, TCP/IP, etc.

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1. L.K. Loucks and C.H. Sauer, "Advanced Interactive Executive (AIX) Operating System Overview," IBM Systems Journal 26, 4 (1987).

2. M. Auslander and M.E. Hopkins, "An Overview of the PL.8 Compiler," Proc. of the SIGPLAN '82 Symposium on Compiler Writing, Boston, MA.

3. C.H. Sauer, D.W. Johnson, L.K. Loucks, A.A. Shaheen-Gouda and T.A. Smith, "RT PC Distributed Services Overview," Operating Systems Review 21, 3 (July 1987) pp. 18-29.

Convergence of AIX and 4.3BSD

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AIX started with a number of BSD features, e.g., 4.2 signals and concurrent groups[1]. Over time, additional features associated with BSD, such as pty's, select, sockets and sendmail have been added, with new features being added in each release. Based on this experience, and experience with 4.3/RT, it appeared that fairly strict BSD compatibility could be achieved, and the authors and others set out to define such compatibility.

This paper describes methodology and decisions made in defining a convergence of BSD 4.3 and AIX. This convergence will be reflected in the AIX Family products and the version of AIX to be provided to the Open Software Foundation.

Among the goals of the work were

POSIX compliance

Base SVID functionality at the SVR2 level

Compatibility with documented and undocumented BSD 4.3 characteristics
and interfaces

Compatibility with existing AIX interfaces

Completeness - providing essentially all BSD 4.3 functions

Minimal redundancy - except in a few cases where redundancy seemed
inescapable, conflicts were resolved to provide a single merged
definition of system call, library and command interfaces. Users
and programmers should normally not be conscious of the historical
basis of the converged interface.

Portability - minimizing porting effort for users and applications
associated with existing AIX and 4.3 implementations.

In addition, many of the system administration facilities were addressed in a converged manner. The effectiveness of the approach is demonstrated by success with test suites originally designed for AIX/RT and 4.3/RT prior to the convergence effort.

ACKNOWLEGEMENT

REFERENCE:

1. L.K. Loucks and C.H. Sauer, "Advanced Interactive Executive (AIX) Operating
   System Overview," IBM Systems Journal 26, 4 (1987).

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En sammenligning mellem RCS og SCCS

Af Greg Woods (woods@gpu.utcs.Toronto.EDU)

First, I've seen a few discussions about this very topic, and since I don't >>always<< like to repeat things already said, I didn't embark on a full explanation :-). [Besides, I rather enjoy being terse the first time around. Then I can say I-told-you-so, or, you-asked-for-it!]

Confession: I've only used RCS in a trivial manner, and never for an entire large project. I have, however, used Polytron VCS for a very large project.

For those who don't know, Polytron VCS is an RCS clone for MS-DOS, VMS, and (RSN) Unix; with a few additions and deletions in the features category. It is not file-format compatible with RCS, nor SCCS,. nor with and other system I know of (maybe it itsn't an RCS clone, though it sure seems like one when you use it!). For the most part, my discussion of RCS applies to VCS. VCS has a slightly better directory management scheme, and it is fully integrated into Polytron Make as well (at least after I got through with "builtins.mak" it was!). Since I last used it, Polytron have added a neat-o forms/menu driven full-screen front-end to VCS. It seems this feature is an un-shakeable requirement in the DOS world.

Support: I have used SCCS in several large projects, and I use it to track all local modifications to Usenet and other outside sources.

Disclaimer: I use Eric Allman's sccs front-end driver. With it, and a couple of aliases, I can make SCCS appear very much like RCS, and make it just as easy to use. My reason for doing so, besides the inherit ease of use, is to allow the stuffing of all those hideous s-file's and p-file's into a subdirectory. At one time, RCS's automatic capability to do so with it's database files was a major attraction.

SCCS disadvantages: For me, SCCS is only missing one necessary feature, and one handy feature: 1. No "automatic" capability to mark a set of files with a "version" (as opposed to revision) tag. 2. No "state" tag.

Both of these are very similar, and one might wonder why RCS provides both when simple naming conventions with (1) can probably satisfy the requirements that may have driven the creation of (2). At least we did quite well without (2) using VCS. I'm not sure if VCS has (2) or not. We didn't use it.

Of small note, and of complete indifference to me, is SCCS's in-ability to include the comments, MR numbers, and other interesting information (that the prs command is able to extract and display from the s-file) into the g-file (actual source). It is slightly annoying that the get keyword list is slightly different, and much restricted, in respect to that of prs. Although I haven't examined all of the possible collisions, I believe this situation could be rectified quite easily.

Also of complete indifference to me is the relatively steep learning curve for SCCS (I know it all :-). To offset this, there is a simple online help facility (more of a reminder service). It is aptly named

This isn't really a disadvantage any more, but old versions of SCCS silently truncated filenames, if the s. prefix made them too long. This is now an error, and if you want to store this file with SCCS, you'll have to come up with a shorter name. I've no experience with RCS's handling of names-too-long (BSD allows wonderfully long names). If it does nothing, it could be in more danger, cause it put's it "id" on the tail of a filename.

SCCS Advantages: Despite claims to the contrary, I feel the SCCS id keyword syntax is quite easy to learn, and very useful. I can include as much, or as little, information about the file, and current revision, as I care to, and in almost any context. Keyword expansion can be turned off, and often "escaped" to prevent expansion.

SCCS seems to allow much more flexible merging of revisions. A list, and/or range(s) of revisions can be specified to be included, or excluded from a get. Rcsmerge seems to allow only two revisions to be merged. I suppose a script of Rcsmerge's could eventually accomplish the same result, with a lot more care. Both systems mark conflicting changes.

SCCS is, in fact, more flexible than RCS in dealing with sub- directories. Not only can directory names be specified on the command line of any SCCS member program, so can it read a list of files (and possibly directories, I haven't checked) from stdin! Along with a suitable driver, such as the aformentioned sccs, file manipulation is a piece of cake!

RCS Disadvantages: (Other than those implicitly mentioned above.) RCS keywords are very limited, and cannot be disabled.

RCS Advantages: (Other than those implicitly mentioned above.) I believe, though I haven't actually verified this, that RCS will allow infinite branching; ie: you could have a revision 1.1.1.1.1.1.1.1.1.1.1. SCCS is much more limited in its world view, and only allows release, level, branch, and sequence id's: ie: only 1.1.1.1. RCS seems to allow zero (0) as a revision component. I haven't had any success getting SCCS to use such.

RCS will automatically create the database when using ci, or it can be done explicitly with rcs, (ala admin in SCCS). Who cares? So can a fastidious driver program using SCCS (unlike sccs), as did the shell scripts I wrote and used before using sccs.

According to something I read in the RCS manuals, RCS "simplifies software distribution ... [such that] ... customer changes can be merged into distributed versions locally, or by the development group". This probably isn't as easy as it implies. It certianly isn't that easy with SCCS. At least not without L. Wall's Patch utility. I've never tried such a feat without it. The sccs driver leaves something to be desired when creating context diffs too. I can't find anything in the RCS manuals to replace patch, so you probably need it when using RCS too.

For the most part, in general use, RCS will do everything you need it to, and more. However, SCCS is a standard tool, and, in my view, provides more functionality and power than RCS. (I know, W. Tichy tried to make RCS standard by putting it on the BSD tape. Too bad he still charges a license fee, and too bad he didn't try/succeed in selling it to AT&T. If it was PD, I'm sure it would win hands down. AT&T might even have picked it up too.)

[Why have I seen RCS advertised for annonymous ftp (and UUCP?) lately. Has the license been voided? Is this only for BSD source licensee's?]

In my case, it's not a religious war. I have both at my finger tips. I spent lots of time and effort making VCS work, and I liked the results. Then I tried SCCS, 'cause nobody had RCS for Xenix. I had enough bad experiences with SCCS to try RCS again when I could. RCS lost. VCS would lose too, except it has no competition (that I have any experience with) in the MS-DOS world. RCS watch out, VCS is coming to a system near you ;-).

BTW: I like Sys V, and emacs (in particular, Jove). Hope this allows all concerned to categorize me and dismiss my remarks I don't fit their mold.

In short, (I know, I wasn't) SCCS is the more capable, flexible, and powerful of the two. Admittedly it is hard to learn, and in some cases, hard to use, but isn't everything that's more powerful and flexible? :-)

Greg Woods.

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GNU task list, last updated 3 Aug 1988

Af Leonard H. Tower Jr. (tower@WHEATIES.AI.MIT.EDU)

Red: GNU er et ambitiøst projekt der går ud på at implementere hele UNIX med tilhørende hjælpeprogrammer for at dette skal være frit tilgængeligt med kildetekst gratis for alle. Af programmel, der allerede er færdigt kan nævnes: GNU EMACS - en avanceret programmerbar editor; gcc - c compiler samt g++ - en C++ compiler. GNU software findes på EUUG-båndene.

0. Documentation

We very urgently need documentation for some parts of the system that already exist or will exist very soon:

A C reference manual.
(RMS has written half of one which you could start with). A GNU Emacs Lisp programming manual (contact us about this, as much has already been done).

Manuals for SH and CSH.

A DIFF manual (not as hard as the others).

Conversion of a manual for T (Yale Scheme) from Scribe to Texinfo so we can use it.

Reference cards for various programs.

1.imitations

csplit, cu, diff3, join, lint, nl, nlist (library), mt, sdiff, su, tip.

Less urgent: banner (both tty horizontal and lpr vertical), calendar, diction, explain, mailx, plot, style.

Berkeley mail (for mail composition and reading only; mail delivery systems are another matter and are being taken care of).

xargs (we have one half-written).

kwik indexer.

nroff/troff, eqn, tbl, and standard macro packages. Probably the equivalent of troff should output dvi files (tex output files). A little of this (an nroff-like macro processor) has been written. A texinfo macro package to improve or replace texi2roff.

Finish an incomplete vi clone. (Someone may be working on this.)

Add a data-base feature to 'find' to make it faster.

Finish an incomplete spelling corrector program.

A tool to examine a C source file and produce a list of 'indent' options which describe the style of indentation in use.

Cross-reference program for C programs
 (like cxref, cflow, etc.)

Various other libraries.

File system maintenance utilities, such as smarter versions of dump and restore.

2. Kernel projects:

Whether we use TRIX or MACH, in either case a new implementation of TCP/IP must be written, and a new disk file system. (Actually, this may no longer be necessary, since BSD's TCP/IP may be declared free, and perhaps the file system from Sprite may be usable.)

An over-the-ethernet debugger that will allow the kernel to be debugged from GDB running on another machine.

A shared memory X11 server to run under MACH or TRIX is very desirable. The machine specific parts should be kept well separated.

3. Extensions to existing GNU software.

Extend GNU Emacs to do desktop publishing. (Talk to phr about this).

Extend GDB with a C interpreter so the user can change the program during a debugging session. Some parts of this are being worked on.

Extend GDB to handle other languages than C.

Port the GNU assembler to the 80386.

Enhance GCC. See files PROJECTS and PROBLEMS in the GCC distribution.

4. Other random projects:

An imitation of dbase2 or dbase3 (How dbased!)

A spreadsheet.

An imitation of Page Maker.

Improve the free UCB version of the Ingres database system to make it competitive with RTI Ingres.

Draw programs for the X window system.

Font editor for the X window system.

A music playing and editing system.

A typing tutor.

A Forth system.

A Smalltalk system.

An APL system.

A Prolog interpreter and compiler. (Are good free ones available?)

A Logo system. (We have one that you can start with, but certain parts of it are poorly written and must be replaced.)

Note that graphics programs should be written to work with the X window system, a free portable window system from MIT and DEC that we will be using as the window system for GNU.

5. Compilers for other batch languages.

Volunteers are needed to write parsers/front ends for languages such as Fortran, Pascal, Algol 60, Algol 68, Modula, PL/I, Ada or whatever, to be used with the code generation phases of the GNU C compiler. (C++ is being done.) The compiler comes with some internal documentation that should help you get started.

It may be possible to adapt the C front end as a lint, preferably not as stupidly stubborn as the Unix lint.

6. Games and recreations

Video-oriented games should work with the X window system.

Empire
Adventure (partly done--contact phr@prep for info)
Rocky's Boots
Chipwits
Imitations of your favorite video games:
 Space war, Asteroids, Pong, SDI, Breakout, Lode Runner, etc.
Compute and display Mandelbrot set and Julia sets
Flight simulator (I have contacts to get you information
 on the equations with which you can do accurate simulation)
Biomorph evolution (as in Scientific American)
A fast simulation of the cellular automaton "life"
A program to display effects of moving at relativistic speeds
We do not need rogue, as we have hack.

Emotional outbursts punctuate conversations by computer

by Erik Eckholm

Red: Dette er en artikel om hvad der kan ske psykologisk med folk der taler med hinanden via elektronisk post.

Computer buffs call it "flaming." Now scientists are documenting and trying to explain the surprising prevalence of rudeness, profanity, exultation and other emotional outbursts by people when they carry on discussions via computer.

The frequent resort to emotional language is just one of several special traits of computer communications discovered by behavioral scientists studying how this new medium affects the message.

Observing both experimental groups and actual working environments, scientists at Carnegie-Mellon University are comparing decision-making through face-to-face discussions with that conducted electronically.

In the experiments, in addition to calling each other more names and generally showing more emotion, people "talking" by computer took longer to agree, and their final decisions tended to be more extreme, involving either greater or lesser risk than the more middle-of-the-road decisions reached by groups meeting in person. Curiously, those who made such decisions through electronic give-and-take believed more strongly in the rightness of their choices.

As small computers proliferate in offices and homes, more business discussions that were once pursued face-to-face, by telephone or on paper are now taking place by way of keyboards and video display terminals. With electronic mail, messages are left in a central computer for reading by correspondents on their own computers at their own convenience. Computer conferences can be carried on simultaneously or not.

In some offices, observers say, the traditional typed memorandum is all but extinct, and computer mail is re-placing even telephone calls. Employees in one corporation studied received or sent an average of 24 computer messages a day.

The unusual characteristics showing up in computer communications should not be seen as entirely negative, say the researchers. When it is not insulting, language that is uninhibited and informal helps to bridge social barriers and may help to draw out some people's ideas. And more extreme decisions can be innovative and creative instead of foolish.

Moreover, members of groups talking electronically tend to contribute much more equally to the discussion.

"This is unusual group democracy," said Dr. Sara Kiesler, a psychologist at Carnegie-Mellon. "There is less of a tendency for one person to dominate the conversation, or for others to defer to the one with the highest status."

Looser standards for discussions

Studies of electronic mail is several Fortune 500 corporations have confirmed the tendency for people to use more informal and expressive language on the computer than when communicating in person, by telephone or by memo.

"Whatever the company's pre-existing standards for the expression of opinion, electronic mail seems to loosen them," Dr. Lee Sproull, a sociologist at Carnegie-Mellon, said in an interview, But in contrast with the experimental findings, in the corporate world positive emotional expressions greatly outnumbered negative ones.

The company studies also indicate that computers are permitting much wider participation in discussions than in the past, with employees far from headquarters now able to follow debates and make their views known.

Unusually expressive language has been one of the most striking characteristics of computer discussions studied in many different contexts. "It's mazing," said Dr. Kiesler. "We've seen messages sent out by managers -- messages that will be seen by thousands of people -- that use language normally heard in locker rooms."

Computer bulletin boards

The frequent use of exuberant and offensive terms has long been noted by observers of computer bulletin boards. In 1982 the Defense Communications Agency, which manages the world's oldest and largest computer network for use by Pentagon employees and contractors, issued the following message to potential bulletin board con-tributors: "Due to past problems with messages deemed in bad taste by 'the authorities,' messages sent to this address are manually screened (generally, every couple of days) before being remailed to the Boards."

Struggling to explain the free-wheeling language that people use on computers, the Carnegie-Mellon scientists note that electronic communications convey none of the non-verbal cues of personal conversation -- the eye contact, facial expressions and voice inflections that provide social feedback and my inhibit extreme behavior. Even a memo, with its letterhead and chosen form, carries more nonverbal information than does a mes-sage on a screen. Also, no strong rules of etiquette for computer conversation have yet evolved.

Computer writers often become deeply engrossed in their message, the researchers have found, but their focus tends to be on the text itself rather than their audience, perhaps another consequence of the lack of non-verbal feed-back.

In a forthcoming paper, Dr. Kiesler and three colleagues posit that "using computers to communicate draws attention to the technology and to the content of communication and away from people and relationships with people."

Hexadecimale tal på dansk

Af Claus Tøndering (ct@dde.uucp)

Det er en stor ulempe for os stakkels programmører at vi ikke er i stand til at udtale gode, smukke hexadecimale tal som 4A2F, 1AF8C osv.

Det bliver der hermed rådet bod på, idet der defineres følgende navne, som er lavet til at passe ind i god dansk tal-navngivningstradition:

1 - en / et
2 - to
3 - tre
4 - fire
5 - fem
6 - seks
7 - syv
8 - otte
9 - ni
A - dis (af fransk "dix")
B - alf (af tysk "elf", endvidere beslægtet med elverfolk)
C - dus (af "dusin")
D - grel (af den til tallet knyttede overtro)
E - pre (af forstavelsen "præ-")
F - ful (af "fuld" - tallet udtales som "fuld", ikke som "fugl")
10 - ti
11 - elleve
12 - tolv
13 - tretten
14 - fjorten
15 - femten
16 - seksten
17 - sytten
18 - atten
19 - nitten
1A - disten
1B - aflten
1C - dusten
1D - grelten
1E - preten
1F - fulten
20 - tyve
21 - enogtyve
2A - disogtyve
2B - alfogtyve
30 - tredive
40 - fyrretyve / fyrre
50 - halvtredsindstyve / halvtreds
60 - tresindstyve / tres
70 - halvfjerdsindstyve / halvfjerds
80 - firsindstyve / firs
90 - halvfemsindstyve / halvfems
A0 - femsinstyve / fems   (af "fem sinde tyve")
B0 - halvsjesindstyve / halvsjes (af "halvsjette sinde tyve")
C0 - sessindstyve / ses   (af "seks sinde tyve")
D0 - halvsyvsindstyve / halvsyvs   (af "halvsyvende sinde tyve")
E0 - syvsindstyve / syvs   (af "syv sinde tyve")
F0 - halvotsindstyve / halvots   (af "halvottende sinde tyve")

Man vil bemærke assimilation i tallene "halvsjesindstyve" og "ses- sindstyve", som rettelig burde hedde "halvsjet-

sindstyve" og "seks- sindstyve". Denne assimilation af t og k er for det første tals ved- kommende begrundet i en ud-talelettelse, som er identisk med den assi- milation som gør at 90 hedder "halvfemsindstyve" i stedet for "halv-femtsindstyve". For det andet tals vedkommende er assimilationen nødvendig for at undgå at den forkortede udtale af C0 bliver "seks".

Et par eksempler vil vise hvor nemme og smidige disse nye talord er at arbejde med:
A3D   - dis hundrede grel og tredive
FCBA3 - dus og halvots tusinde alf hundrede tre og fems
FF   - fuloghalvots

I overensstemmelse med dansk retskrivning skal tal under 100 skrives i et ord, mens tal over 100 skrives i flere ord.

De til de nye talord hørende ordental er følgende:

A. - diste
B. - alfte
C. - duste
D. - grelte
E. - preende
F. - fulte
1A. - distende
1B. - alftende
1C. - dustende
1D. - greltende
1E. - pretende
1F. - fultende
A0. - femsindstyvende
B0. - halvsjessindstyvende
C0. - sessindstyvende
D0. - halvsyvsindstyvende
E0. - syvsindstyvende
F0. - halvotsindstyvende

Ordenstallene for de en-cifrede tal som ender på en konsonant er dannet i analogi med fem/femte. Tallet "pre", som ender på en vokal, har fået ordenstallet "preende" i analogi med ti/tiende.

"..., men så satte jeg den treogsessindstyvende byte til at være det dobbelte af den dusoghalvtredsindstyvende byte, og så kom det hele til at virke!" --- Nemt, smukt, elegant, produktivt.

Et program for den evige løkke

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Well... I lost my mind one day when I saw a piece of code like
```
        long time();/* know C */
```
and this was the result. I think that it lints ok. (I haven't really checked) It compiles and runs, but it's really intended for very careful reading. (I like to think that there are a few subtle jokes in it.)

```
/*
 * find the important things in Life, the Universe, and Everything
 */

typedef short    some;        /* some things are short */
typedef some very;            /* some things are very short */

#define A                     /* The first letter of the English Alphabet */
#define LINE 2                /* 2 points define a line */

#define TRUTH    BEAUTY       /* truth is beauty */
#define BEAUTY   10           /* and beauty is a 10 */
```

```
#define bad   char        /* burnt on both sides */
#define old   char        /* the great Chicago Fire */

#define     get   strlen  /* during your life, try to get some sterling */
#define youmake    float  /* you make it, I'll drink it */


#define          yourgoals   in terms you can understand
/*
#include    "yourdreams"/* for the future */


        /* everyone needs goals */

short term;
doubleyourpleasure();
doubleyourfun;

long   Term, play(), agame;

        /* everyone needs diversions */

old *joke = "Why did the chicken cross the road?\n\tTo get to the other side!\n";


tell(joke)
bad    *joke;         /* wait- you haven't heard it yet! */
{
        short laugh;/* please */

        laugh = get(joke);
        write(1, joke, laugh);   /* write it down- don't say it */

}


        /* most folks like music */

long play(record)
long record;
{
        very pleasant = TRUTH;        /* if you like music */

        while (record == pleasant)
             play(record--);

        return( pleasant );           /* music soothes the savage */
}


doubleyourpleasure(one, way)        /* this is necessary if */
some   one;                       /* is watching ,or if you have a */
long   way;                       /* to go */
{
             /* this can change one while maintaining one's identity */
        one = one * one;
        return( one );            /* after all, it should have at least doubled */
}

hold(temper)              /* good advice */
A short temper;               /* is a dangerous thing */
{
        A longtime;      /* is what you need */
```

```
        very calm;          /* is how you should be */

        calm = temper, temper;

        while (calm--)
                wait(&time);

        return(calm);           /* if possible */
}


        /* now, on to the main thing */

main(thing, mustbe)                 /* to balance work, play, and goals */
some thing, mustbe;                 /* important, or we wouldn't be here */
{

        long  time();           /* know C */
        very  bored;        /* the result of too few goals */

        short hours;        /* make */
        long  yourwork;     /* which makes for */
        short tempers;      /* which can be improved by */
        long  laughing;


        /* first, set priorities */
        yourwork = 0;
        yourfun = 1.0e+38;

        if (yourpleasure( mustbe, yourwork ))
                yourfun = yourwork;
        else
                yourfun = play( agame );

        bored = yourfun - yourwork;     /* nothing to do? */
                                    /* reach out and touch someone! */

        switch ( bored ) { /* connects all of this together */
        default:
                hours = hold(LINE); /* no way to avoid it, take a */
                break;
        }

                /* take a music break */
        while ( thing-- ) {     /* you make my heart sing */
                youmake everything;
                very groovy;
        }

                /* focus on what is important to you */
        while ( yourfun < 0 ) {
                yourpleasure( mustbe, agame);
                yourfun = play( agame );
        }

        tell(joke);

        exit( laughing );
}
```

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190 Andet systemnært maskinel

Systemprogrammel og udviklingsværktøjer
211 Applikationsgenerator
212 Backupsystem
213 Benchmarks
214 Oversætter
215 Debugger
216 Editor
217 Emulator
218 Grafikudvikling
219 Oversætter fra sprog til sprog
220 Bibliotek
221 Menusystem
222 Operativsystem
223 Del til operativsystem
224 Bruger- & operativsystemgrænseflade
225 Programmeringssprog
226 Rapportgenerator
227 Sikkerhedssystem
228 Programudvikling
229 Programgenerator
230 Spooler
231 Systemadministration
290 Andet systemprogrammel
291 Andet udviklingsværktøj

Generelt erhvervsprogrammel
311 Regnskab
312 Kommunikation
313 Computer-Aided Applikationer
314 Databasesystem/applikationsgenerator
315 Ekspertsystem/Kunstig Intelligens
316 Full Text Retrieval
·317 Grafik
318 Kontorautomations værktøjer
319 Personale og løn
320 Ordrebehandling
321 Regneark

322 Planlægningsværktøj
323 Tekstbehandling/dokumentformatering
390 Andet opgaveorienteret programmel

Erhvervsspecifikt programmel
411 Annoncering
412 Landbrug
413 Bygge- og anlæg
414 Ansættelse og rekruttering
415 Ingeniørvirksomhed
416 Finansanalyse
417 Offentlig administration
418 Booking hotel mv.
419 Forsikring
420 Lagerstyring
421 Advokat
422 Fremstilling/distribution
423 Matematik/statistik
424 Læge og tandlæge
425 Medlemsadministration
426 Foreninger
427 Olieindustri
428 Projektstyring
429 Ejendomsadministration
430 Detailhandel
431 Salg og marketing
432 Bogtrykning og publikationer
433 Administration af befordringsmidler
490 Andet brancheorienteret programmel

Tjenesteydelser
711 Design af applikationsprogrammel
712 Udførelse af benchmarks
713 Konsulentvirksomhed
714 Arbejdsformidling
715 Adresselister
716 Portering og installation
717 Design af systemprogrammel
718 Afprøvning og validering
720 Timesharing
721 Uddannelse
722 Materialer til uddannelse
723 Sætning og trykning
724 UNIX-brugergruppe
790 Anden service

Publikationer
611 Bøger, tidsskrifter