```
**********************************************************
   11468 Sat Feb 23 16:58:57 2013
new/usr/src/cmd/Makefile
30 Need iconv
**********************************************************
```

```
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  28 include ../Makefile.master

  30 #
  31 #       Note that the commands 'agents', 'lp', 'perl', and 'man' are first in
  32 #       the list, violating alphabetical order.  This is because they are very
  33 #       long-running and should be given the most wall-clock time for a
  34 #       parallel build.
  35 #
  36 #       Commands in the FIRST_SUBDIRS list are built before starting the build
  37 #       of other commands.  Currently this includes only 'isaexec' and
  38 #       'platexec'.  This is necessary because $(ROOT)/usr/lib/isaexec or
  39 #       $(ROOT)/usr/lib/platexec must exist when some other commands are built
  40 #       because their 'make install' creates a hard link to one of them.
  41 #
  42 #       Commands are listed one per line so that TeamWare can auto-merge most
  43 #       changes.
  44 #

  46 FIRST_SUBDIRS=          \
  47         isaexec         \
  48         platexec

  50 COMMON_SUBDIRS=         \
  51         allocate        \
  52         availdevs       \
  53         lp              \
  54         perl            \
  55         man             \
  56         Adm             \
  57         abi             \
  58         adbgen          \
  59         acct            \
  60         acctadm         \
  61         arch            \
```



```
  62         asa             \
  63         ast             \
  64         audio           \
  65         auths           \
  66         autopush        \
  67         avs             \
  68         awk             \
  69         awk_xpg4        \
  70         backup          \
  71         banner          \
  72         bart            \
  73         basename        \
  74         bc              \
  75         bdiff           \
  76         beadm           \
  77         bfs             \
  78         bnu             \
  79         boot            \
  80         busstat         \
  81         cal             \
  82         calendar        \
  83         captoinfo       \
  84         cat             \
  85         cdrw            \
  86         cfgadm          \
  87         checkeq         \
  88         checknr         \
  89         chgrp           \
  90         chmod           \
  91         chown           \
  92         chroot          \
  93         clear           \
  94         clinfo          \
  95         cmd-crypto      \
  96         cmd-inet        \
  97         col             \
  98         compress        \
  99         consadm         \
 100         coreadm         \
 101         cpio            \
 102         cpc             \
 103         cron            \
 104         crypt           \
 105         csh             \
 106         csplit          \
 107         ctrun           \
 108         ctstat          \
 109         ctwatch         \
 110         datadm          \
 111         date            \
 112         dc              \
 113         dd              \
 114         deroff          \
 115         devfsadm        \
 116         syseventd       \
 117         devctl          \
 118         devinfo         \
 119         devmgmt         \
 120         devprop         \
 121         dfs.cmds        \
 122         diff            \
 123         diff3           \
 124         diffmk          \
 125         dircmp          \
 126         dirname         \
 127         dis             \
```

```
128         diskmgtd        \
129         dispadmin       \
130         dladm           \
131         dlstat          \
132         dmesg           \
133         dodatadm        \
134         dtrace          \
135         du              \
136         dumpadm         \
137         dumpcs          \
138         echo            \
139         ed              \
140         eeprom          \
141         egrep           \
142         eject           \
143         emul64ioctl     \
144         enhance         \
145         env             \
146         eqn             \
147         expand          \
148         expr            \
149         exstr           \
150         factor          \
151         false           \
152         fcinfo          \
153         fcoesvc         \
154         fdetach         \
155         fdformat        \
156         fdisk           \
157         filesync        \
158         fgrep           \
159         file            \
160         filebench       \
161         find            \
162         flowadm         \
163         flowstat        \
164         fm              \
165         fmt             \
166         fmthard         \
167         fmtmsg          \
168         fold            \
169         format          \
170         fs.d            \
171         fstyp           \
172         fuser           \
173         fwflash         \
174         gcore           \
175         gencat          \
176         geniconvtbl     \
177         genmsg          \
178         getconf         \
179         getdevpolicy    \
180         getent          \
181         getfacl         \
182         getmajor        \
183         getopt          \
184         gettext         \
185         gettxt          \
186         grep            \
187         grep_xpg4       \
188         groups          \
189         grpck           \
190         gss             \
191         hal             \
192         halt            \
193         head            \
```



```
194         hostid          \
195         hostname        \
196         hotplug         \
197         hotplugd        \
198         hwdata          \
199         ibd_upgrade     \
200         iconv           \
201 #endif /* ! codereview */
202         id              \
203         idmap           \
204         infocmp         \
205         init            \
206         initpkg         \
207         install.d       \
208         intrd           \
209         intrstat        \
210         ipcrm           \
211         ipcs            \
212         ipf             \
213         isainfo         \
214         isalist         \
215         itutools        \
216         iscsiadm        \
217         iscsid          \
218         iscsitsvc       \
219         isns            \
220         itadm           \
221         java            \
222         kbd             \
223         keyserv         \
224         killall         \
225         krb5            \
226         ksh             \
227         kvmstat         \
228         last            \
229         lastcomm        \
230         latencytop      \
231         ldap            \
232         ldapcachemgr    \
233         lgrpinfo        \
234         line            \
235         link            \
236         dlmgmtd         \
237         listen          \
238         loadkeys        \
239         locale          \
240         localedef       \
241         lockstat        \
242         locator         \
243         lofiadm         \
244         logadm          \
245         logger          \
246         login           \
247         logins          \
248         look            \
249         ls              \
250         luxadm          \
251         lvm             \
252         mach            \
253         machid          \
254         mail            \
255         mailx           \
256         makekey         \
257         mdb             \
258         mesg            \
259         mkdir           \
```

```
260         mkfifo          \
261         mkfile          \
262         mkmsgs          \
263         mknod           \
264         mkpwdict        \
265         mktemp          \
266         modload         \
267         more            \
268         mpathadm        \
269         msgfmt          \
270         msgid           \
271         mt              \
272         mv              \
273         mvdir           \
274         ndmpadm         \
275         ndmpd           \
276         ndmpstat        \
277         netadm          \
278         netfiles        \
279         newform         \
280         newgrp          \
281         news            \
282         newtask         \
283         nice            \
284         nl              \
285         nlsadmin        \
286         nohup           \
287         nsadmin         \
288         nscd            \
289         oamuser         \
290         oawk            \
291         od              \
292         pack            \
293         pagesize        \
294         passmgmt        \
295         passwd          \
296         pathchk         \
297         pbind           \
298         pcidr           \
299         pcitool         \
300         pfexec          \
301         pfexecd         \
302         pginfo          \
303         pgstat          \
304         pgrep           \
305         picl            \
306         plimit          \
307         policykit       \
308         pools           \
309         power           \
310         powertop        \
311         ppgsz           \
312         pg              \
313         plockstat       \
314         pr              \
315         prctl           \
316         print           \
317         printf          \
318         priocntl        \
319         profiles        \
320         projadd         \
321         projects        \
322         prstat          \
323         prtconf         \
324         prtdiag         \
325         prtvtoc         \
```



```
326         ps              \
327         psradm          \
328         psrinfo         \
329         psrset          \
330         ptools          \
331         pwck            \
332         pwconv          \
333         pwd             \
334         pyzfs           \
335         raidctl         \
336         ramdiskadm      \
337         rcap            \
338         rcm_daemon      \
339         rctladm         \
340         refer           \
341         regcmp          \
342         renice          \
343         rexd            \
344         rm              \
345         rmdir           \
346         rmformat        \
347         rmmount         \
348         rmt             \
349         rmvolmgr        \
350         roles           \
351         rpcbind         \
352         rpcgen          \
353         rpcinfo         \
354         rpcsvc          \
355         runat           \
356         sa              \
357         saf             \
358         sasinfo         \
359         savecore        \
360         sbdadm          \
361         script          \
362         scsi            \
363         sdiff           \
364         sdpadm          \
365         sed             \
366         sendmail        \
367         setfacl         \
368         setmnt          \
369         setpgrp         \
370         setuname        \
371         sgs             \
372         sh              \
373         shcomp          \
374         smbios          \
375         smbsrv          \
376         smserverd       \
377         soelim          \
378         sort            \
379         spell           \
380         split           \
381         sqlite          \
382         srchtxt         \
383         srptadm         \
384         srptsvc         \
385         ssh             \
386         stat            \
387         stmfadm         \
388         stmfproxy       \
389         stmfsvc         \
390         stmsboot        \
391         streams         \
```

```
392         strings         \
393         su              \
394         sulogin         \
395         sunpc           \
396         svc             \
397         svr4pkg         \
398         swap            \
399         sync            \
400         sysdef          \
401         syseventadm     \
402         syslogd         \
403         tabs            \
404         tail            \
405         tar             \
406         tbl             \
407         tcopy           \
408         tcpd            \
409         terminfo        \
410         th_tools        \
411         tic             \
412         time            \
413         tip             \
414         tnf             \
415         touch           \
416         tput            \
417         tr              \
418         trapstat        \
419         troff           \
420         true            \
421         truss           \
422         tsol            \
423         tty             \
424         ttymon          \
425         tzreload        \
426         uadmin          \
427         ul              \
428         uname           \
429         units           \
430         unlink          \
431         unpack          \
432         userattr        \
433         users           \
434         utmp_update     \
435         utmpd           \
436         valtools        \
437         vgrind          \
438         vi              \
439         volcheck        \
440         volrmmount      \
441         vrrpadm         \
442         vscan           \
443         vt              \
444         w               \
445         wall            \
446         which           \
447         who             \
448         whodo           \
449         wracct          \
450         write           \
451         wusbadm         \
452         xargs           \
453         xstr            \
454         yes             \
455         ypcmd           \
456         yppasswd        \
457         zdb             \
```



```
458         zdump           \
459         zfs             \
460         zhack           \
461         zic             \
462         zinject         \
463         zlogin          \
464         zoneadm         \
465         zoneadmd        \
466         zonecfg         \
467         zonename        \
468         zpool           \
469         zlook           \
470         zonestat        \
471         zstreamdump     \
472         ztest

474 $(CLOSED_BUILD)COMMON_SUBDIRS += \
475         $(CLOSED)/cmd/iconv     \
476         $(CLOSED)/cmd/ksh       \
477         $(CLOSED)/cmd/localedef \
478         $(CLOSED)/cmd/more_xpg4 \
479         $(CLOSED)/cmd/mtst      \
480         $(CLOSED)/cmd/od        \
481         $(CLOSED)/cmd/patch     \
482         $(CLOSED)/cmd/pax       \
483         $(CLOSED)/cmd/printf    \
484         $(CLOSED)/cmd/sed       \
485         $(CLOSED)/cmd/sed_xpg4

487 i386_SUBDIRS=           \
488         acpihpd         \
489         addbadsec       \
490         biosdev         \
491         diskscan        \
492         lms             \
493         ntfsprogs       \
494         parted          \
495         rtc             \
496         ucodeadm        \
497         xvm

499 sparc_SUBDIRS=          \
500         cvcd            \
501         dcs             \
502         device_remap    \
503         drd             \
504         fruadm          \
505         ldmad           \
506         oplhpd          \
507         prtdscp         \
508         prtfru          \
509         scadm           \
510         sckmd           \
511         sf880drd        \
512         virtinfo        \
513         vntsd

515 #
516 # Commands that are messaged.  Note that 'lp' and 'man' come first
517 # (see previous comment about 'lp' and 'man').
518 #
519 MSGSUBDIRS=             \
520         lp              \
521         man             \
522         abi             \
523         acctadm         \
```

```
524         allocate        \
525         asa             \
526         audio           \
527         audit           \
528         auditconfig     \
529         auditd          \
530         auditrecord     \
531         auditset        \
532         auths           \
533         autopush        \
534         avs             \
535         awk             \
536         awk_xpg4        \
537         backup          \
538         banner          \
539         bart            \
540         basename        \
541         beadm           \
542         bnu             \
543         busstat         \
544         cal             \
545         cat             \
546         cdrw            \
547         cfgadm          \
548         checkeq         \
549         checknr         \
550         chgrp           \
551         chmod           \
552         chown           \
553         cmd-crypto      \
554         cmd-inet        \
555         col             \
556         compress        \
557         consadm         \
558         coreadm         \
559         cpio            \
560         cpc             \
561         cron            \
562         csh             \
563         csplit          \
564         ctrun           \
565         ctstat          \
566         ctwatch         \
567         datadm          \
568         date            \
569         dc              \
570         dcs             \
571         dd              \
572         deroff          \
573         devfsadm        \
574         dfs.cmds        \
575         diff            \
576         diffmk          \
577         dladm           \
578         dlstat          \
579         du              \
580         dumpcs          \
581         ed              \
582         eject           \
583         env             \
584         eqn             \
585         expand          \
586         expr            \
587         fcinfo          \
588         fgrep           \
589         file            \
```



```
590         filesync        \
591         find            \
592         flowadm         \
593         flowstat        \
594         fm              \
595         fold            \
596         fs.d            \
597         fwflash         \
598         geniconvtbl     \
599         genmsg          \
600         getconf         \
601         getent          \
602         gettext         \
603         gettxt          \
604         grep            \
605         grep_xpg4       \
606         grpck           \
607         gss             \
608         halt            \
609         head            \
610         hostname        \
611         hotplug         \
612         id              \
613         idmap           \
614         isaexec         \
615         iscsiadm        \
616         iscsid          \
617         isns            \
618         itadm           \
619         kbd             \
620         krb5            \
621         ksh             \
622         last            \
623         ldap            \
624         ldapcachemgr    \
625         lgrpinfo        \
626         locale          \
627         lofiadm         \
628         logadm          \
629         logger          \
630         logins          \
631         ls              \
632         luxadm          \
633         lvm             \
634         mailx           \
635         mesg            \
636         mkdir           \
637         mkpwdict        \
638         mktemp          \
639         more            \
640         mpathadm        \
641         msgfmt          \
642         mv              \
643         ndmpadm         \
644         ndmpstat        \
645         newgrp          \
646         newtask         \
647         nice            \
648         nohup           \
649         oawk            \
650         pack            \
651         passwd          \
652         passmgmt        \
653         pathchk         \
654         pfexec          \
655         pg              \
```

```
656         pgrep           \
657         picl            \
658         pools           \
659         power           \
660         pr              \
661         praudit         \
662         print           \
663         profiles        \
664         projadd         \
665         projects        \
666         prstat          \
667         prtdiag         \
668         ps              \
669         psrinfo         \
670         ptools          \
671         pwconv          \
672         pwd             \
673         pyzfs           \
674         raidctl         \
675         ramdiskadm      \
676         rcap            \
677         rcm_daemon      \
678         refer           \
679         regcmp          \
680         renice          \
681         roles           \
682         rm              \
683         rmdir           \
684         rmformat        \
685         rmmount         \
686         rmvolmgr        \
687         sasinfo         \
688         sbdadm          \
689         scadm           \
690         script          \
691         scsi            \
692         sdiff           \
693         sdpadm          \
694         sgs             \
695         sh              \
696         shcomp          \
697         smbsrv          \
698         sort            \
699         split           \
700         srptadm         \
701         ssh             \
702         stat            \
703         stmfadm         \
704         stmsboot        \
705         strings         \
706         su              \
707         svc             \
708         svr4pkg         \
709         swap            \
710         syseventadm     \
711         syseventd       \
712         tabs            \
713         tar             \
714         tbl             \
715         time            \
716         tnf             \
717         touch           \
718         tput            \
719         troff           \
720         tsol            \
721         tty             \
```



```
722         ttymon          \
723         tzreload        \
724         ul              \
725         uname           \
726         units           \
727         unlink          \
728         unpack          \
729         userattr        \
730         valtools        \
731         vgrind          \
732         vi              \
733         volcheck        \
734         volrmmount      \
735         vrrpadm         \
736         vscan           \
737         w               \
738         who             \
739         whodo           \
740         wracct          \
741         write           \
742         wusbadm         \
743         xargs           \
744         yppasswd        \
745         zdump           \
746         zfs             \
747         zic             \
748         zlogin          \
749         zoneadm         \
750         zoneadmd        \
751         zonecfg         \
752         zonename        \
753         zpool           \
754         zonestat

756 $(CLOSED_BUILD)MSGSUBDIRS += \
757         $(CLOSED)/cmd/iconv     \
758         $(CLOSED)/cmd/ksh       \
759         $(CLOSED)/cmd/localedef \
760         $(CLOSED)/cmd/more_xpg4 \
761         $(CLOSED)/cmd/od        \
762         $(CLOSED)/cmd/patch     \
763         $(CLOSED)/cmd/pax       \
764         $(CLOSED)/cmd/printf    \
765         $(CLOSED)/cmd/sed       \
766         $(CLOSED)/cmd/sed_xpg4

768 sparc_MSGSUBDIRS=       \
769         fruadm          \
770         prtdscp         \
771         prtfru          \
772         virtinfo        \
773         vntsd

775 i386_MSGSUBDIRS=        \
776         ucodeadm

778 #
779 # commands that use dcgettext for localized time, LC_TIME
780 #
781 DCSUBDIRS=              \
782         cal             \
783         cfgadm          \
784         diff            \
785         ls              \
786         pr              \
787         ps              \
```

```
788         tar             \
789         w               \
790         who             \
791         whodo           \
792         write

794 $(CLOSED_BUILD)DCSUBDIRS += \
795         $(CLOSED)/cmd/pax

797 #
798 # commands that belong only to audit.
799 #
800 AUDITSUBDIRS=           \
801         amt             \
802         audit           \
803         audit_warn      \
804         auditconfig     \
805         auditd          \
806         auditrecord     \
807         auditreduce     \
808         auditset        \
809         auditstat       \
810         praudit

812 #
813 # commands not owned by the systems group
814 #
815 BWOSDIRS=


818 all :=          TARGET = all
819 install :=      TARGET = install
820 clean :=        TARGET = clean
821 clobber :=      TARGET = clobber
822 lint :=         TARGET = lint
823 _msg :=         TARGET = _msg
824 _dc :=          TARGET = _dc

826 .KEEP_STATE:

828 SUBDIRS = $(COMMON_SUBDIRS) $($(MACH)_SUBDIRS)

830 .PARALLEL:      $(BWOSDIRS) $(SUBDIRS) $(MSGSUBDIRS) $(AUDITSUBDIRS)

832 all install clean clobber lint: $(FIRST_SUBDIRS) .WAIT $(SUBDIRS) \
833         $(AUDITSUBDIRS)

835 #
836 # Manifests cannot be checked in parallel, because we are using
837 # the global repository that is in $(SRC)/cmd/svc/seed/global.db.
838 # For this reason, to avoid .PARALLEL and .NO_PARALLEL conflicts,
839 # we spawn off a sub-make to perform the non-parallel 'make check'
840 #
841 check:
842         $(MAKE) -f Makefile.check check

844 #
845 # The .WAIT directive works around an apparent bug in parallel make.
846 # Evidently make was getting the target _msg vs. _dc confused under
847 # some level of parallelization, causing some of the _dc objects
848 # not to be built.
849 #
850 _msg: $(MSGSUBDIRS) $($(MACH)_MSGSUBDIRS) .WAIT _dc

852 _dc: $(DCSUBDIRS)
```



```
854 #
855 # Dependencies
856 #
857 fs.d: fstyp
858 ksh:    shcomp isaexec
859 mdb:    terminfo
860 print:  lp

862 $(FIRST_SUBDIRS) $(BWOSDIRS) $(SUBDIRS) $(AUDITSUBDIRS): FRC
863         @if [ -f $@/Makefile  ]; then \
864                 cd $@; pwd; $(MAKE) $(TARGET); \
865         else \
866                 true; \
867         fi

869 FRC:
```

```
**********************************************************
    1401 Sat Feb 23 16:58:57 2013
new/usr/src/cmd/iconv/Makefile
30 Need iconv
**********************************************************
```

```
#
# CDDL HEADER START
#
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#

PROG= iconv

include ../Makefile.cmd

OBJS    = charmap.o iconv.o parser.tab.o scanner.o

.KEEP_STATE:

CFLAGS +=       $(CCVERBOSE)

LDLIBS += -lcmdutils
YFLAGS  = -d -b parser

CLEANFILES      = $(OBJS) parser.tab.c parser.tab.h

all: $(PROG)

install: all $(ROOTPROG)

$(PROG):        $(OBJS)
        $(LINK.C) $(CFLAGS) $(OBJS) -o $@ $(LDLIBS)

$(OBJS):        parser.tab.h

parser.tab.c parser.tab.h: parser.y
        $(YACC) $(YFLAGS) parser.y

clean:
        $(RM) $(CLEANFILES)

lint:   lint_PROG

include ../Makefile.targ
#endif /* ! codereview */
```

****
754 Sat Feb 23 16:58:57 2013
new/usr/src/cmd/iconv/charmap.c
30 Need iconv
****

```
/*
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 *
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 * source.  A copy of the CDDL is also available via the Internet at
 * http://www.illumos.org/license/CDDL.
 */

/*
 * Copyright 2010 Nexenta Systems, Inc.  All rights reserved.
 * Copyright 2013 David Hoeppner.  All rights reserved.
 */

/*
 * Character map handling for iconv.
 */

#include "iconv.h"
#include "parser.tab.h"

void
init_charmap(void)
{

}

void
add_charmap(char *sym, int c)
{

}

void
add_charmap_range(char *s, char *e, int wc)
{

}
#endif /* ! codereview */
```

```
**********************************************************
    8794 Sat Feb 23 16:58:58 2013
new/usr/src/cmd/iconv/iconv.c
30 Need iconv
**********************************************************
```

```
/*
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 *
 * A full copy of the text of the CDDL should have accompanied this
 * source.  A copy of the CDDL is also available via the Internet at
 * http://www.illumos.org/license/CDDL.
 */

/*
 * Copyright 2011 Nexenta Systems, Inc.  All rights reserved.
 * Copyright 2013 David Hoeppner.  All rights reserved.
 */

/*
 * POSIX iconv.
 */

#include <sys/list.h>

#include <errno.h>
#include <glob.h>
#include <iconv.h>
#include <langinfo.h>
#include <libnvpair.h>
#include <locale.h>
#include <stddef.h>
#include <string.h>
#include <unistd.h>

#include "iconv.h"

static const char *g_progname = "iconv";

static char     *g_from_cs = "UTF-8";
static char     *g_to_cs = "UTF-8";
static iconv_t  g_ich;                  /* iconv(3c) lib handle */
static int      g_errcnt;
static boolean_t g_cflag = B_FALSE;     /* Skip invalid characters */
static boolean_t g_sflag = B_FALSE;     /* Silent */
static boolean_t g_lflag = B_FALSE;     /* List conversions */


/*
 * Forward declarations.
 */
static void     usage(void) __NORETURN;
static void     do_iconv(FILE *, const char *);
static void     list_codesets(void);
int             yyparse(void);

typedef struct _iconv_item {
        list_node_t     ii_next;
        list_t          ii_alias_list;
        char            *ii_name;
} iconv_item_t;

typedef struct _iconv_alias {
        list_node_t     ia_next;
```



```
        char            *ia_name;
} iconv_alias_t;

/*
 * Print usage.
 */
static void
usage(void)
{
        /* XXX g_progname */
        (void) fprintf(stderr, _(
            "usage:\ticonv [-cs] [-f fromcode] [-t tocode] [file ...]\n"
            "\ticonv [-cs] -f frommap -t tomap [file ...]\n"));
        (void) fprintf(stderr, _("\t%s -l\n"), g_progname);
        exit(1);
}


int
main(int argc, char **argv)
{
        char    *fname;
        FILE    *fp;
        int     c;

        init_charmap();

        /* XXX */
        yydebug = 1;

        (void) setlocale(LC_ALL, "");
#if !defined(TEXT_DOMAIN)               /* Should be defined by cc -D */
#define TEXT_DOMAIN     "SYS_TEST"      /* Use this only if it weren't */
#endif
        (void) textdomain(TEXT_DOMAIN);

        while ((c = getopt(argc, argv, "clsf:t:?")) != EOF) {
                switch (c) {
                case 'c':
                        g_cflag = B_TRUE;
                        break;
                case 'l':
                        g_lflag = B_TRUE;
                        break;
                case 's':
                        g_sflag = B_TRUE;
                        break;
                case 'f':
                        g_from_cs = optarg;
                        break;
                case 't':
                        g_to_cs = optarg;
                        break;
                case '?':
                        usage();
                }
        }

        if (g_lflag) {
                if (optind != argc)
                        usage();
                list_codesets();
                exit(0);
        }

        /* XXX form_cs not only codeset */
```

```
128         if (strstr(g_from_cs, "/") != NULL) {
129                 reset_scanner(g_from_cs);
130                 (void) yyparse();
131         }

133         /* XXX empty string "" current encoding */
134         if (g_from_cs == NULL) {
135                 g_from_cs = nl_langinfo(CODESET);
136                 printf("%s\n", g_from_cs);
137         }
138         if (g_to_cs == NULL)
139                 g_to_cs = nl_langinfo(CODESET);

141         /*
142          * XXX todo: deal with charmap files (/paths)
143          */

145         g_ich = iconv_open(g_to_cs, g_from_cs);
146         if (g_ich == ((iconv_t)-1)) {
147                 if (errno == EINVAL) {
148                         (void) fprintf(stderr, gettext("Not supported %s to %s\n
149                             g_from_cs, g_to_cs);
150                 } else {
151                         (void) fprintf(stderr, "iconv_open failed\n");
152                 }
153                 exit(1);
154         }

156         if (optind == argc || (optind == argc - 1 &&
157             0 == strcmp(argv[optind], "-"))) {
158                 do_iconv(stdin, "stdin");
159                 exit(0);
160         }

162         for (; optind < argc; optind++) {
163                 fp = fopen(argv[optind], "r");
164                 if (fp == NULL) {
165                         perror(argv[optind]);
166                         exit(1);
167                 }
168                 do_iconv(fp, argv[optind]);
169                 (void) fclose(fp);
170         }

172         return (EXIT_SUCCESS);
173 }

175 /*
176  * Do actual conversion, copying *fp to stdout.
177  *
178  * Conversions may grow or shrink data, so using a larger output buffer
179  * to reduce the likelihood of leftover input buffer data in each pass.
180  */

182 #define IBUFSIZ 1024
183 #define OBUFSIZ (2*IBUFSIZ)

185 void
186 do_iconv(FILE *fp, const char *fname)
187 {
188         const char *iptr;
189         char    ibuf[IBUFSIZ];
190         char    obuf[OBUFSIZ];
191         char    *optr;
192         size_t  ileft, icnt, oleft, ocnt;
193         int     nr, nw, rc;
```



```
195         while ((nr = fread(ibuf, 1, IBUFSIZ, fp)) > 0) {

197                 iptr = ibuf;
198                 ileft = nr;

200                 while (ileft > 0) {
201                         optr = obuf;
202                         oleft = OBUFSIZ;
203                         rc = iconv(g_ich, &iptr, &ileft, &optr, &oleft);
204                         if (rc == (size_t)-1) {
205                                 /*
206                                  * XXX todo: deal with skipping invalid
207                                  * input characters and continue...
208                                  */
209                                 g_errcnt++;
210                                 break;
211                         }
212                         ocnt = OBUFSIZ - oleft;
213                         nw = fwrite(obuf, 1, ocnt, stdout);
214                         if (nw != ocnt) {
215                                 perror("write");
216                                 exit(1);
217                         }
218                 }
219         }

221         /*
222          * End of file. Flush any shift encodings.
223          */
224         iptr = NULL;
225         ileft = 0;
226         optr = obuf;
227         oleft = OBUFSIZ;
228         iconv(g_ich, &iptr, &ileft, &optr, &oleft);
229         ocnt = OBUFSIZ - oleft;
230         fwrite(obuf, 1, ocnt, stdout);
231 }

233 /*
234  * Item is in the list?
235  */
236 static boolean_t
237 iconv_find(list_t *list, const char *name)
238 {
239         iconv_item_t    *head;
240         boolean_t       found = B_FALSE;

242         head = list_head(list);
243         while (head != NULL) {
244                 if (strcmp(head->ii_name, name) == 0) {
245                         found = B_TRUE;
246                         break;
247                 }
248                 head = list_next(list, head);
249         }

251         return (found);
252 }

254 /*
255  * Insert into a sorted list.
256  */
257 static void
258 iconv_insert(list_t *list, const char *name)
259 {
```

```
260         iconv_item_t    *head;
261         iconv_item_t    *item;

263         head = list_head(list);
264         while (head != NULL && strcmp(head->ii_name, name) < 0)
265                 head = list_next(list, head);

267         item = (iconv_item_t *)malloc(sizeof (iconv_item_t));

269         list_link_init(&item->ii_next);
270         list_create(&item->ii_alias_list, sizeof (iconv_alias_t),
271             offsetof(iconv_alias_t, ia_next));

273         item->ii_name = strdup(name);

275         list_insert_before(list, head, item);
276 }

278 static void
279 iconv_insert_create(list_t *list, const char *name)
280 {
281         if (!iconv_find(list, name))
282                 iconv_insert(list, name);
283 }

285 static void
286 iconv_print(list_t *list)
287 {
288         iconv_item_t    *head;
289         iconv_alias_t   *alias_head;

291         (void) fprintf(stdout, gettext(
292             "The following are all supported code set names.  All combinations\n
293             "of those names are not necessarily available for the pair of the\n"
294             "fromcode-tocode.  Some of those code set names have aliases, which\
295             "are case-insensitive and shown after the canonical name:\n"));

297         head = list_head(list);
298         while (head != NULL) {
299                 (void) fprintf(stdout, "%s", head->ii_name);

301                 if (!list_is_empty(&head->ii_alias_list)) {
302                         printf(" (");
303                         alias_head = list_head(&head->ii_alias_list);
304                         while (alias_head != NULL) {
305                                 (void) fprintf(stdout, "%s",
306                                     alias_head->ia_name);

308                                 alias_head = list_next(&head->ii_alias_list,
309                                     alias_head);

311                                 if (alias_head != NULL)
312                                         (void) fprintf(stdout, ", ");
313                         }
314                         (void) fprintf(stdout, ")");
315                 }

317                 (void) fprintf(stdout, ",\n");

319                 head = list_next(list, head);
320         }
321 }

323 /*
324  * List all codesets available.
325  */
```



```
326 static void
327 list_codesets(void)
328 {
329         list_t  item_list;
330         glob_t  globbuf;
331         FILE    *fp;
332         char    *alias, *ptr, *chomp;
333         char    buf[1024];
334         int     i;

336         list_create(&item_list, sizeof (iconv_item_t),
337             offsetof(iconv_item_t, ii_next));

339 #define _ICONV_PATH     "/usr/lib/iconv/"

341         /* XXX search path depends on arch amd64 etc */
342         (void) chdir(_ICONV_PATH);
343         (void) glob("*%*.so", GLOB_NOSORT, NULL, &globbuf);
344         (void) chdir("geniconvtbl/binarytables");
345         (void) glob("*%*.bt", GLOB_NOSORT|GLOB_APPEND, NULL, &globbuf);

347         for (i = 0; i < globbuf.gl_pathc; i++) {

349                 ptr = globbuf.gl_pathv[i];
350                 alias = strsep(&ptr, "%");

352                 chomp = ptr;
353                 for (; *chomp; chomp++) {
354                         if (*chomp == '.')
355                                 *chomp = '\0';
356                 }

358                 iconv_insert_create(&item_list, ptr);
359                 iconv_insert_create(&item_list, alias);
360         }

362         globfree(&globbuf);

364         (void) chdir(_ICONV_PATH);
365         (void) glob("*.*.t", GLOB_NOSORT, NULL, &globbuf);

367         for (i = 0; i < globbuf.gl_pathc; i++) {

369                 ptr = globbuf.gl_pathv[i];
370                 alias = strsep(&ptr, ".");
371 printf("%s\n", ptr);
372                 chomp = ptr;
373                 for (; *chomp; chomp++) {
374                         if (*chomp == '.')
375                                 *chomp = '\0';
376                 }

378                 iconv_insert_create(&item_list, ptr);
379                 iconv_insert_create(&item_list, alias);
380         }

382         globfree(&globbuf);

384         /*
385          * Read in the alias file and build up a list of
386          * encoding aliases.
387          */
388         fp = fopen("alias", "r");
389         if (fp == NULL) {
390                 fprintf(stderr, gettext(
391                     "Failed to open the conversion alias file: %s\n"),
```

```
392                     "XXX");
393
394                 /* XXX free list */
395                 return;
396         }
397
398         while (fgets(buf, sizeof (buf), fp) != NULL) {
399                 iconv_item_t *head;
400                 iconv_alias_t *alias_head;
401
402                 /* Skip comments */
403                 if (buf[0] == '#')
404                         continue;
405
406                 ptr = buf;
407                 alias = strsep(&ptr, " \t");
408
409                 chomp = ptr;
410                 for (; *chomp; chomp++) {
411                         if (*chomp == '\n')
412                                 *chomp = '\0';
413                 }
414
415                 head = list_head(&item_list);
416                 while (head != NULL &&
417                     strcmp(head->ii_name, ptr) < 0)
418                         head = list_next(&item_list, head);
419
420                 if (head != NULL) {
421                         alias_head = (iconv_alias_t *)malloc(
422                             sizeof (iconv_alias_t));
423                         list_link_init(&alias_head->ia_next);
424                         alias_head->ia_name = strdup(alias);
425
426                         list_insert_tail(&head->ii_alias_list, alias_head);
427                 }
428         }
429
430         iconv_print(&item_list);
431
432         /* XXX free list */
433
434         (void) fclose(fp);
435 }
436 #endif /* ! codereview */
```

```
**********************************************************
    1092 Sat Feb 23 16:58:58 2013
new/usr/src/cmd/iconv/iconv.h
30 Need iconv
**********************************************************
```

```
/*
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 * source.  A copy is of the CDDL is also available via the Internet
 * at http://www.illumos.org/license/CDDL.
 */

/*
 * Copyright 2013 David Hoeppner.  All rights reserved.
 */

/*
 * POSIX iconv.
 */

#include <sys/types.h>

#include <libintl.h>
#include <stdarg.h>
#include <stdio.h>
#include <stdlib.h>
#include <strings.h>

/*
 * Macros.
 */
#define _(x)    gettext(x)

extern int      com_char;       /* Comment character */
extern int      esc_char;       /* Escape character */

extern int      yydebug;
extern int      lineno;

/*
 * Functions from scanner.c
 */
void    reset_scanner(const char *);
void    yyerror(const char *);
void    errf(const char *, ...);
void    scan_to_eol(void);

/*
 * Functions from charmap.c
 */
void    init_charmap(void);
void    add_charmap(char *, int);
void    add_charmap_range(char *, char *, int);
#endif /* ! codereview */
```

```
**********************************************************
    1426 Sat Feb 23 16:58:58 2013
new/usr/src/cmd/iconv/parser.y
30 Need iconv
**********************************************************
```

```
%{
/*
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 *
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 * source.  A copy of the CDDL is also available via the Internet at
 * http://www.illumos.org/license/CDDL.
 */

/*
 * Copyright 2010 Nexenta Systems, Inc.  All rights reserved.
 */

/*
 * POSIX charmap grammar.
 */

#include <wchar.h>
#include <stdio.h>
#include <limits.h>
#include "iconv.h"

%}
%union {
        int             num;
        wchar_t         wc;
        char            *token;
}

%token          T_CODE_SET
%token          T_MB_CUR_MAX
%token          T_MB_CUR_MIN
%token          T_COM_CHAR
%token          T_ESC_CHAR
%token          T_LT
%token          T_GT
%token          T_NL
%token          T_SEMI
%token          T_COMMA
%token          T_ELLIPSIS
%token          T_RPAREN
%token          T_LPAREN
%token          T_QUOTE
%token          T_NULL
%token          T_WS
%token          T_END
%token          T_COPY
%token          T_CHARMAP
%token          T_WIDTH
%token          T_WIDTH_DEFAULT
%token  <wc>            T_CHAR
%token  <token>         T_NAME
%token  <num>           T_NUMBER
%token  <token>         T_SYMBOL

%%

charmap         : T_CHARMAP T_NL charmap_list T_END T_CHARMAP T_NL
```



```
charmap_list    : charmap_list charmap_entry
                | charmap_entry
                ;


charmap_entry   : T_SYMBOL T_CHAR
                {
                        add_charmap($1, $2);
                        scan_to_eol();
                }
                | T_SYMBOL T_ELLIPSIS T_SYMBOL T_CHAR
                {
                        add_charmap_range($1, $3, $4);
                        scan_to_eol();
                }
                | T_NL
                ;
#endif /* ! codereview */
```

```
**********************************************************
    5173 Sat Feb 23 16:58:58 2013
new/usr/src/cmd/iconv/scanner.c
30 Need iconv
**********************************************************
```

```
/*
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 * source.  A copy of the CDDL is also available via the Internet at
 * http://www.illumos.org/license/CDDL.
 */

/*
 * Copyright 2010 Nexenta Systems, Inc.  All rights reserved.
 * Copyright 2013 David Hoeppner.  All rights reserved.
 */

/*
 * Functions to charmap .
 */

#include <assert.h>

#include "iconv.h"
#include "parser.tab.h"

/*
 * Charmap specific.
 */
int             com_char = '#';
int             esc_char = '\\';
int             mb_cur_max = 1;
int             mb_cur_min = 1;

int             lineno = 1;
static FILE     *input = stdin;
static const char *filename = "<stdin>";
static int      escaped = 0;
static int      instring = 0;
static int      nextline;

/*
 * Tokens.
 */
static char     *token = NULL;
static int      tokidx;
static int      toksz = 0;
static int      hadtok = 0;

/*
 * Wide strings.
 */
static wchar_t  *widestr = NULL;
static int      wideidx = 0;
static int      widesz = 0;

/*
 * Keywords related.
 */
static int      category = T_END;

static struct token {
```



```
        int     id;
        const char *name;
} keywords[] = {
        { T_COM_CHAR,           "comment_char" },
        { -1, NULL },
};

/*
 * Charmap reserved keywords.
 */
static struct token symwords[] = {
        { T_COM_CHAR,           "comment_char" },
        { -1, NULL },
};

/*
 * Reset the scanner variables and open the supplied charmap file.
 */
void
reset_scanner(const char *fname)
{
        input = fopen(fname, "r");
        if (input == NULL) {
                perror("fopen");
                exit(4);
        }

        filename = fname;
        com_char = '#';
        esc_char = '\\';
        instring = 0;
        escaped = 0;
        lineno = 1;
        nextline = 1;
        tokidx = 0;
        wideidx = 0;
}

static int
scanc(void)
{
        int     c;

        c = getc(input);
        lineno = nextline;
        if (c == '\n') {
                nextline++;
        }

        return (c);
}

static void
unscanc(int c)
{
        if (c == '\n') {
                nextline--;
        }

        if (ungetc(c, input) < 0) {
                yyerror(_("ungetc failed"));
        }
}

void
add_tok(int c)
```

```
{
        if ((tokidx + 1) >= toksz) {
                toksz += 64;

                if ((token = realloc(token, toksz)) == NULL) {
                        yyerror(_("out of memory"));
                        tokidx = 0;
                        toksz = 0;
                        return;
                }
        }

        token[tokidx++] = (char)c;
        token[tokidx] = 0;
}

int
get_escaped(int c)
{
        switch (c) {
        case 'n':
                return ('\n');
        case 'r':
                return ('\r');
        case 't':
                return ('\t');
        case 'f':
                return ('\f');
        case 'v':
                return ('\v');
        case 'b':
                return ('\b');
        case 'a':
                return ('\a');
        default:
                return (c);
        }
}

int
get_symbol(void)
{
        int     c;

        while ((c = scanc()) != EOF) {
                if (escaped == 1) {
                        escaped = 0;
                        if (c == '\n') {
                                continue;
                        }

                        add_tok(get_escaped(c));
                        continue;
                }

                if (c == esc_char) {
                        escaped = 1;
                        continue;
                }

                if (c == '\n') {        /* Well that's strange! */
                        yyerror(_("unterminated symbolic name"));
                        continue;
                }

                if (c == '>') {         /* End of symbol */
```



```
                        /*
                         * This restarts the token from the beginning
                         * the next time we scan a character.  (This
                         * token is complete.)
                         */
                        if (token == NULL) {
                                yyerror(_("missing symbolic name"));
                                return (T_NULL);
                        }

                        tokidx = 0;

                        /* XXX */
                        if (category == T_END) {

                        }

                        /* XXX */

                        /* Its an undefined symbol */
                        yylval.token = strdup(token);
                        token = NULL;
                        toksz = 0;
                        tokidx = 0;

                        return (T_SYMBOL);
                }

                add_tok(c);
        }

        yyerror(_("unterminated symbolic name"));

        return (EOF);
}

static int
consume_token(void)
{
        /* XXX */

        printf("XXX consume_token XXX\n");

        return (T_NAME);
}

void
scan_to_eol(void)
{
        int     c;

        while ((c = scanc()) != '\n') {
                if (c == EOF) {
                        /* end of file without newline! */
                        errf(_("missing newline"));
                        return;
                }
        }

        assert(c == '\n');
}

int
yylex(void)
{
        int     c;
```

```
printf("yylex\n");
        while ((c = scanc()) != EOF) {

                /* If it is the escape character itself note it */
                if (c == esc_char) {
                        escaped = 1;
                        continue;
                }

                /* Remove from the comment character to end of line */
                if (c == com_char) {
                        while (c != '\n') {
                                if ((c = scanc()) == EOF) {
                                        /* End of file without newline */
                                        return (EOF);
                                }
                        }

                        assert(c == '\n');

printf("NEWLINE\n");
                        if (hadtok == 0) {
                                /*
                                 * If there were no tokens on this line,
                                 * then just pretend it didn't exist at all.
                                 */
                                continue;
                        }

                        hadtok = 0;
                        return (T_NL);
                }

                if (strchr(" \t\n;()<>,\"", c) && (tokidx != 0)) {
                        /*
                         * These are all token delimiters.  If there
                         * is a token already in progress, we need to
                         * process it.
                         */
                        unscanc(c);
                        return (consume_token());
                }

                switch (c) {
                case '\n':
                        return (T_NL);
                case '>':
                        hadtok = 1;
                        return (T_GT);
                case '<':
                        /* Symbol start! */
                        hadtok = 1;
                        return (get_symbol());
                case ' ':
                case '\t':
                        /* Whitespace, just ignore */
                        continue;
                case '"':
                        hadtok = 1;
                        instring = 1;
                        return (T_QUOTE);
                default:
                        hadtok = 1;
                        add_tok(c);
                        continue;
                }
```



```
        }

        return (EOF);
}

void
yyerror(const char *msg)
{
        (void) fprintf(stderr, _("%s: %d: error: %s\n"),
            filename, lineno, msg);
        exit(4);
}

void
errf(const char *fmt, ...)
{
        /* XXX */

        exit(4);
}
#endif /* ! codereview */
```