GENERAL SPECIFICATIONS

THE PURPOSE OF THE LONDON STAGE PROJECT INPUT SYSTEM IS TO READ IN DATA IN THE FORMAT DESCRIBED IN 'LOGICAL STRUCTURE OF INPUT DATA' AND, AFTER PERFORMING LADDER UPDATES ON 'AS', 'SEE', AND CAST GROUP LADDER ENTRIES, TO PRODUCE A DATA BASE CONSISTING OF SORT RECORDS WITH FIELDS RESERVED FOR THE FOLLOWING ITEMS ON EACH RECORD ..
1) DATE
2) SECTION TYPE
3) THEATRE
4) SYNTACTIC TITLE, IF ANY
5) TIME, IF ANY
6) SYNTACTIC ROLE, IF ANY
7) SYNTACTIC ACTOR, IF ANY

ALL POSSIBLE COMBINATIONS WILL BE PRODUCED IN THESE SORT RECORDS, THAT IS IF THERE IS A CAST GROUP WITH 2 ROLES AND 3 ACTORS THEN 6 SORT RECORDS WILL BE PRODUCED.

SCANNER INPUT DATA FORMAT

SCANNER INPUT IS ORIGINALLY IN THE FORM OF FIXED LENGTH BLOCKS 800 BYTES LONG, DIVIDED INTO 10 LINES OF 80 CHARACTERS EACH. THE LAST 5 CHARACTERS OF EACH LINE ARE SUPPOSED TO ALWAYS BE BLANK. THEY ARE TO BE IGNORED AND DELETED BY THE SCANNER INPUT EDITING PROGRAM, ICISCAN. DIFFERENT BLOCKING IS PERMISSIBLE AS LONG AS THE LRECL IS 80.

BATCHES OF INPUT DATA (ALL THE DATA INPUT TO ONE RUN OF A PROGRAM) MUST START WITH A PERFORMANCE AND MUST CONTAIN ONLY COMPLETE PERFORMANCES IN ORDER TO OBTAIN COMPLETE ACCURATE PROCESSING.

THE OUTPUT IS TO BE U FORMAT BLKS ACCEPTABLE AS INPUT TO A SYNTACTICAL PARSING PROGRAM CALLED STRCT (SHORT FOR 'STRUCTURE').

SINCE THE ICI SCANNER INTERPRETS THE DOUBLE QUOTE CHARACTER AS 2 SINGLE QUOTE CHARACTERS, ICISCAN WILL CONVERT ANY 2 CONSECUTIVE SINGLE QUOTE CHARACTERS IT FINDS INTO ONE DOUBLE QUOTE CHARACTERS.
OTHER FUNCTIONS OF ICISCAN INCLUDE 'AT' SIGN PROCESSING (DEFINED ELSEWHERE), DELETING MULTIPLE BLANKS EXCEPT FOR 2 AFTER PERIODS, QUESTION MARKS, AND EXCLAMATION POINTS, CHECKING FOR ILLEGAL CHARACTERS, AND REBLOCKING INTO AN INTEGRAL NUMBER OF SECTIONS PER BLOCK, EXCEPT IN ADDITION, DOUBLE BLANKS WILL BE RETAINED AFTER PERIODS, QUESTION MARKS, OR EXCLAMATION POINTS WHEN ANY OF THESE IS FOLLOWED IMMEDIATELY BY EITHER SINGLE OR DOUBLE QUOTES IN THE LOGICAL TEXT.

STARTING WITH THE FIRST, EVERY THIRD BLK OF SCAN INPUT MUST
START WITH THE TYPIST'S INITIAL AND
A PAGE NUMBER. THE ENTRY MUST BE THE VERY FIRST PRINTED CHARACTERS ON EACH TYPED PAGE, AND MUST BE IN THE FOLLOWING FORMAT ..
1) AN ASTERISK
2) A CAPITAL LETTER
3) 1 TO 5 DECIMAL DIGITS
4) A BLANK
TYPIST ENTRIES ON ON A LINE WILL BE PROCESSED BEFORE ANY
'AT' SIGN PROCESSING, SO TYPIST ENTRIES MUST BE CORRECT WITHOUT THE HELP OF 'AT' SIGNS. THIS SHOULD BE EASY SINCE ONLY THE FIRST FEW CHARACTERS OF THE PAGE ARE INVOLVED.

IN INPUT TO THE SCAN PROGRAM THE DELETIONS DEFINED BY
'AT' SIGNS WILL BE PERFORMED LINE BY LINE IN THE FOLLOWING ORDER ..
1) IF 3 CONTIGUOUS 'AT' SIGNS ARE FOUND ANYWHERE ON THE LINE THEN THE
MEMBER NAME DOCGENSP

ENTIRE LINE WILL BE DELETED FORTHWITH.

2) IF 2 CONTIGUOUS 'AT' SIGNS ARE ENCOUNTERED THEN THE 'AT' SIGNS
AND ALL CHARACTERS BETWEEN THE 'AT' SIGNS AND THE FIRST BLANK TO
THE LEFT OF THE 'AT' SIGNS WILL BE DELETED.
THE FIRST BLANK TO THE LEFT OF THE 'AT' SIGNS WILL NOT BE DELETED.
THIS WILL BE DONE LEFT TO RIGHT ACROSS THE LINE REPEATEDLY
UNTIL NO DOUBLE 'AT' SIGNS ARE LEFT.

3) IF AN ISOLATED 'AT' SIGN IS THEN FOUND THEN THE 'AT' SIGN AND THE
CHARACTER TO ITS LEFT WILL BE DELETED.
THIS WILL BE DONE LEFT TO RIGHT ACROSS THE LINE REPEATEDLY
UNTIL NO 'AT' SIGNS ARE LEFT.

SUBLTIES NOT DONE BY CHINA DATA ..

1) ABNORMAL (UNCERTAIN OR NONEXISTENT) DATES.
2) SOME BOX TAGGING, ESPECIALLY VERY ABNORMAL BOXES.
3) SUBTITLE TAGGING.
4) LADDER CHANGES EXCEPT FOR REPLACEMENT AND ADDITION AS IS
MOST COMMONLY FOUND IN THE TEXT.
(that is no signed ladder changes)
5) INDEX TAGGING
6) TIME NOTATION

0

ITEMSET SELECTION/EXCLUSION SPECIFICATIONS

************************************************************************

THE ITEMSET PROGRAM WILL HAVE THE ABILITY TO SELECT INDIVIDUAL
SORT RECORDS, GROUPS OF SORT RECORDS, SECTIONS OF SORT RECORDS, ENTIRE
PERFORMANCES OF SORT RECORDS, AND TO EXCLUDE SORT RECORDS OUTSIDE OF
CERTAIN DATE RANGES. ALL OF THE PRECEDING CAPABILITIES MAY BE COMBINED
ALTHOUGH IT IS ENVISIONED THAT ONLY 1 OR 2 CAPABILITIES WILL BE USED
IN ANY ONE RUN. SELECTION MAY BE BASED ON ANY COMBINATION
OF THE ITEMS PRESENT IN A SORT RECORD. THESE ITEMS ARE ..
SECTION TYPE LETTER, DATE, THEATRE, TITLE, TIME ENTRY, ROLE,
AND ACTOR.

PROCESSING TO BE DONE FOR INDIRECT SortS ..

1) MR, MRS, MISS, MLLE, SG, SGA, QUOTES, AND CAPITAL FOLLOWED BY
A PERIOD WILL BE PLACED BEHIND THE ACTUAL NAME, INCLUDING
COMBINATIONS OF THESE. SPACES WILL THEN BE TAKEN OUT AND
ALL LETTERS CONVERTED TO UPPERCASE.
LEADING 'THE', 'A', AND 'AN' WILL BE TREATED SIMILARLY FOR TITLES.
SUFFIXES WILL NOT BE AFFECTED.

*** THE LOGICAL STRUCTURE OF INPUT DATA ***

************************************************************************

THE LARGEST COMPONENT OF INPUT DATA IS THE S/360 LOGICAL RECORD,
REFERRED TO HEREAFTER IN THIS REPORT AS A BLK (BLOCK). FOR SAVEDT
INPUT EACH BLK SHOULD CONSIST OF ONE OR MORE COMPLETE SECTIONS, ALSO
CALLED BOXES. EXAMPLES OF SECTIONS ARE ..
PLAY SECTIONS, AFTERPIECE SECTIONS, DANCE SECTIONS, OPERA SECTIONS,
SONG SECTIONS, ETC. THE SECTIONS ARE GROUPED INTO PERFORMANCES, WHICH
CONSIST OF ONE PLAY SECTION (MAINPIECE PLAY) & ALL THE OTHER SECTIONS
THAT FOLLOW THE PLAY SECTION AND PRECEDE THE NEXT PLAY SECTION.
ANOTHER WAY TO THINK OF A PERFORMANCE IS 'ALL OF THE BOXES ASSOCIATED
WITH ONE THEATRE ON ONE DATE'.

ALL OF THE ABOVE ALSO APPLIES TO SCANNER INPUT EXCEPT
THAT THERE IS NO RESTRICTION ON SECTIONS BEING CONTAINED
WITHIN ONE SCANNER INPUT BLK, ETC.

IT SHOULD BE NOTED THAT SOMETIMES A PLAY SECTION IS USED FOR
SPECIAL PURPOSES OTHER THAN PROVIDING INFORMATION ABOUT A PLAY
Given at a certain theatre on a certain date. These special uses of the play section will be described below.

Each section starts with a three character sequence that defines both the start of a section and the end of a previous section if there was a previous one in the same blk. The 1st char of this tag is a blank. The second char is a unique character that is never to occur following a blank and immediately preceding a small letter anywhere in the text except to define the start of a section. It is called the section tag character. For mtst input this character is the prefix. For scanner input an asterisk is used. The third character of the tag is a small letter. Only certain letters are allowed. These are listed elsewhere.

All sections except comment sections may contain 2 kinds of text, structured text, and extraneous text. A comment section consists entirely of extraneous text. Extraneous text contains only one kind of item of significance to programming, the siu tagged index entry. Index entries occur only in extraneous text. They are delimited on the left either by a '$' or by a '++', and on the right by an equal sign followed by 1 or 2 tag characters. If there are 2 tag characters then the first one is a decimal digit. If the tag is a blank then the type of index entry is unknown. Otherwise the tag indicates semantically the type of index entry, eg., role, author, street name, etc. The '$' type index entry indicates a person or place, the '++' indicates an italicised index entry.

Index entries with a double character tag may not exceed 125 characters in length. Similarly index entries with one-character tags may not exceed 124 characters in length. Both the above limits include the index delimiters and the equal sign.

For saved index entries always start with a blank-prefix-large letter or quote. An untagged or unknown type of index entry can end with another prefix-small letter or quote. A tagged index entry on the mtst will be indicated by an equals sign as the right-hand delimiter with the tag immediately following the equals sign. A blank in this location is another way of indicating an unknown type of index entry, as with the scanner.

Except for comment sections extraneous text is defined in either of the following 2 ways...

1) On the left a left bracket, and on the right by one of the following...
   a) First occurrence of a percent sign following the left bracket.
   b) First occurrence of a right bracket following the left bracket provided that another left bracket does not lie between the original left bracket and the right bracket.

2) On the left with a left paren, and on the right with a right paren.

Extraneous text delimited in one of these 2 ways may contain delimiters used by the other method. That is, for example, extraneous text delimited by brackets may contain parentheses.

The delimiters are considered part of the extraneous text. Each pair of delimiters must define extraneous text to be entirely within one section. If there is no matching (right paren for left paren, right bracket or percent sign for left bracket) right delimiter following the left delimiter in the same section then the entire remainder of the section following the left delimiter will be considered extraneous text, however an error message will be generated.

Page entries are a way of informing the computer of what page of the London stage any item of text came from. Page entries are identified anywhere in the text by a 'p' (blank-small p) followed immediately by
MEMBER NAME DOCGENSP

AN UNSIGNED DECIMAL NUMBER WHICH IS ENDED BY A BLANK ON THE RIGHT ..
FOR EXAMPLE ' P132 '. NOTE THAT THIS PAGE ENTRY IS 6 CHARACTERS LONG
INCLUDING THE BLANKS, WHICH ARE IMPORTANT AND NECESSARY.
PAGE ENTRIES CAN OCCUR IN FRONT OF MOST ITEMS, HOWEVER THE FOLLOWING
RESTRICTIONS AND CONVENTIONS MUST BE FOLLOWED ..
A) A PAGE ENTRY MAY NOT OCCUR INSIDE A DATE ENTRY, IT MUST EITHER
   PRECEDE THE ENTIRE DATE OR ELSE PRECEDE THE THEATRE ENTRY WHICH
   FOLLOWS THE DATE.
B) SIMILARLY PAGE ENTRIES CANNOT OCCUR INSIDE A LADDER ENTRY.
C) PAGE ENTRIES MAY NOT FOLLOW A 'BUT' - THAT IS 'BUT P312 ITEM'
   IS NOT ALLOWED, EVEN THOUGH THE PAGE ENTRY DOES IMMEDIATELY
   PRECEDE AN ITEM.
D) THE PAGE ENTRY MUST IMMEDIATELY PRECEDE THE ITEM, SEPARATED
   FROM
   THE ITEM ONLY BY ONE OR MORE BLANKS OR THE EQUIVALENT (CARRIAGE
   RETURNS, LINENEEDS, AND MTST RUBOUT CHARACTERS).
E) NOTE THAT A SECTION DELIMITER SEQUENCE OR ANY OTHER TYPE OF
   PUNCTUATION IS NOT AN ITEM.
F) PAGE ENTRIES MAY NOT FOLLOW A TIME ENTRY. INSTEAD THEY
   MUST EITHER PRECEDE THE TIME ENTRY OR PRECEDE THE ITEM
   THAT FOLLOWS THE ITEM THAT FOLLOWS THE TIME ENTRY.

ROMAN PAGE ENTRIES, ANALOGOUS TO ORDINARY PAGE ENTRIES, ARE USED
IN EXTRANEOUS TEXT DERIVED FROM INTRODUCTIONS. IT IS SIMILAR
TO THE ORDINARY PAGE ENTRY IN THAT IT IS PRECEDED AND FOLLOWED BY
AT LEAST ONE BLANK. IT IS SYNTACTICALLY DEFINED BY A BLANK-EXCLAMATION
POINT COMBINATION IMMEDIATELY PRECEDING A SERIES OF ONE OR MORE
LEGITIMATE ROMAN NUMERAL CHARACTERS AND ENDING WITH A BLANK.
EXCEPT THAT IT IS ALLOWED ONLY IN INTRODUCTIONS, IT MAY OCCUR ANYWHERE
THAT AN ORDINARY PAGE ENTRY COULD OCCUR IN A COMMENT SECTION.

THERE ARE 4 BASIC KINDS OF SECTIONS ..
1) PLAY SECTIONS. THIS KIND OF SECTION IS REQUIRED TO HAVE
   A THEATRE PRECEEDING ITS TITLE. IT MAY ALSO HAVE ONE OR MORE
   PARTS OF A DATE PRECEEDING THE THEATRE.
2) SIMPLE TITLED SECTIONS DO NOT HAVE A DATE, THEATRE, OR TITLE TIME
   ENTRY. ALL TITLED SECTIONS EXCEPT PLAY SECTIONS MAY
   BE SIMPLE TITLED SECTIONS.
3) TITLE SECTIONS WITH TITLE TIME ENTRIES HAVE A TIME ENTRY PRECEDING
   THE TITLE OF THE SECTION .. THE TIME ENTRY IS OF THE SAME FORM
   AS FOR CAST GROUP TIME ENTRIES, THAT IS THEY MUST PRECEDE THE TITLE
   IN A SECTION , AND ARE SEPARATED FROM THE TITLE BY THE COLON-BLANK
   DEFINING THE END OF THE TIME ENTRY. WHEN A TITLE TIME
   ENTRY IS ENCOUNTERED THE EFFECT IS ..
   A) ALL GROUPS IN THE CAST LIST WITH AT LEAST ONE ROLE OR ACTOR
      HAVE THE TIME ENTRY APPENDED TO THE GROUP.
   B) IF THERE ARE NO ROLES OR ACTORS IN THE CAST LIST THEN A GROUP
      CONTAINING ONLY THE TIME ENTRY WILL BE APPENDED TO THE END OF
      THE CAST LIST.
4) UNTITLED SECTIONS DO NOT HAVE SECTION TITLES, DATE ENTRIES,
   OR THEATRE ENTRIES. IF ANY OF
   THESE SORTS OF ITEMS HAPPEN TO BE IN AN UNTITLED SECTION THEN
   IT WILL BE TREATED AS SOMETHING IN A CAST GROUP.
   THERE MAY BE MORE THAN ONE TITLED SECTION ONE ONE DATE AT ONE THEATRE
   (IN ONE PERFORMANCE), BUT THERE MAY NOT BE MORE THAN ONE EACH OF ANY
   UNTITLED KIND OF SECTION. THERE MUST BE EXACTLY ONE PLAY
SECTION, AND OF COURSE, IT COMES FIRST IN EACH PERFORMANCE.

THE FOLLOWING SECTION TYPES ARE SPECIFIED ..

P   PLAY
    MUST HAVE THEATRE & TITLE, MAY HAVE
    DATE ENTRY .. NO TIME ENTRIES
    OF ANY TYPE ALLOWED AT ALL.
<table>
<thead>
<tr>
<th>Member Name</th>
<th>Docgensp</th>
<th>Titled</th>
<th>No Time Entries of Any Type Allowed at All.</th>
<th>Extraneous May Contain Siu Index Entries.</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Afterpiece</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>Comment</td>
<td>Untitled</td>
<td></td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>Dance</td>
<td>Untitled</td>
<td></td>
<td></td>
</tr>
<tr>
<td>S</td>
<td>Song</td>
<td>Untitled</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>Music</td>
<td>Untitled</td>
<td></td>
<td></td>
</tr>
<tr>
<td>E</td>
<td>Entertainment</td>
<td>Untitled</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I</td>
<td>Instrumental</td>
<td>Titled</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>Ballet</td>
<td>Titled</td>
<td></td>
<td></td>
</tr>
<tr>
<td>T</td>
<td>Trick</td>
<td>Titled</td>
<td></td>
<td></td>
</tr>
<tr>
<td>U</td>
<td>Monologue with Parts</td>
<td>Titled</td>
<td></td>
<td></td>
</tr>
<tr>
<td>O</td>
<td>Opera</td>
<td>Titled</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

An opera section is really a song section having a syntactical title and cast list instead of just a cast list. It will not be distinguished by China data from other song sections.

Any of the following is to be considered a group of structured input...

Performance Header - Date, if any, and theatre (A page entry is generally not considered a part of the group).

Title of a section
Ballet part-Ballerina/Ballerino
Musical instrument-Musician
Opera part-Operator
Trick part-Trickster
Role-Actor groups
Entertainment-Entertainer groups
Song-Singer groups
Dance-Dancer groups
Music-Musician groups
'as' type ladder references
'see' type ladder references

For the purposes of the typist any of the following things is an item...

Role
Actor
Time entry
Syntactic titles
Syntactic subtitles
_PLAY, AFTERPEICE,OPERA,BALLE T,TRICK, ETC._

Opera
Ballet
Instrumental Music
Trick
Theatre
Each part of a date (but for some purposes the entire date is considered to be an item)

Ladder reference
Index entry
Dance
Dancer
Musical price
Musician
Song
Singer
MEMBER NAME DOCGENSP
ENTERTAINMENT
ENTERTAINER

THE UNTITLED TYPES OF SECTIONS (E,D,M,S) MAY EITHER CONTAIN A
CAST LIST OR THEY MAY BE EMPTY, EXISTING ONLY TO SHOW THAT THERE
WAS SOME OF THEIR PARTICULAR TYPE OF ACTIVITY ON THE GIVEN DATE
AT THE GIVEN THEATRE.

A SYNTACTIC TITLE MUST ALWAYS BE PRESENT IN A TITLED SECTION.
IF THE TITLE IS NOT KNOWN THEN EITHER 'NONE' OR 'LADR' MUST
BE PUT IN AS THE TITLE. IF SUCH A SECTION HAS A TITLE LADDER
REFERENCE THEN 'LADR' IS USED, OTHERWISE 'NONE' IS USED.
THESE ARE SPELLED WITH THE FIRST LETTER CAPITALIZED, THE REST SMALL.
THEY ARE USED BOTH TO INDICATE THESE SPECIAL CASES AND TO SATISFY
THE REQUIREMENT THAT EACH TITLED SECTION HAVE A SYNTACTIC TITLE.
THE SAME THING GOES FOR THEATRE ENTRIES IN PERFORMANCE
SECTIONS, EXCEPT THAT 'NONE' IS ALWAYS USED, AND IT IS TYPED
ENTIRELY IN SMALL LETTERS. SIMILARLY, IF ALL OR PART OF A DATE IS
UNKNOWN THEN 'O' MUST BE PUT IN FOR EACH UNKNOWN PART. THE VALUE OF
EACH PART OF A DATE THAT IS WRITTEN AS ZERO REMAINS THE SAME AS IT
WAS BEFORE, BUT THAT PART OF THE DATE IS MARKED IN THE OUTPUT DATA AS
BEING ACTUALLY UNKNOWN. THE ENTIRE DATE THEN SERVES ONLY AS AN ESTIMATE
OR GUESS FOR THE REAL DATE. SINCE NO PART OF A DATE THAT IS WRITTEN
AS ZERO IS CHANGED, YOU MUST WRITE SUCCESSIVE UNCERTAIN DATES
EXPLICITLY WITH 0'S IN THE UNCERTAIN PARTS OF THE DATE.
NO LADDER REFERENCE CAN REFER TO A PERFORMANCE THAT HAS AN UNCERTAIN
DATE, THEATRE, OR TITLE.

LADDER REFERENCES ARE OF THE FORM ..
'AS/SEE XX MONTH (XXXX)'
WHERE 'XX' IS A NUMBER BETWEEN 1 AND 31 REPRESENTING THE DAY OF THE
MONTH, 'MONTH' IS A 3 TO 5 CHARACTER STRING REPRESENTING THE MONTH
OF THE YEAR, AND 'XXXX' IS A NUMBER REPRESENTING THE YEAR. THE
PARENTHESES AROUND THE YEAR INDICATE THAT THE YEAR PART IS OPTIONAL.
IF THE YEAR IS NOT ENTERED THEN THE CURRENT YEAR FROM WHICH THE
LADDER REFERENCE IS BEING MADE IS TAKEN TO BE THE YEAR REFERRED TO.
BOTH 'AS' AND 'SEE' MAY START WITH EITHER LARGE OR SMALL LETTERS.
A PERIOD MAY FOLLOW THE MONTH AND/OR YEAR PARTS, BUT NO OTHER
PUNCTUATION, ESPECIALLY COMMAS, SHOULD APPEAR BETWEEN THE PARTS OF
A LADDER REFERENCE.

NO SECTION MAY HAVE MORE THAN ONE TITLED TYPE LADDER REFERENCE
IN IT. NO TITLE TYPE LADDER REFERENCE CAN BE PRECEDED
BY ANY GROUPS IN THE SAME CAST LIST. OF COURSE IT MAY BE PRECEDED BY
A TITLE, THEATRE, OR DATE ENTRY IN THE CASE OF A PERFORMANCE SECTION
OR A TITLE IN THE CASE OF A TITLED SECTION.
THE END OF A LADDER ENTRY MAY BE DELIMITED EITHER BY A SEMICOLON,
COMMA, MINUS SIGN, OR END OF SECTION, DEPENDING ON CIRCUMSTANCES.

'AS' TYPE LADDER REFERENCES WILL BE DONE AS DESCRIBED IN THE
5 MAY OCRB II 'TYPING INSTRUCTIONS FOR THE LONDON STAGE PROJECT'.
THE LADDER CHANGE CAPABILITIES ARE TO BE ..
1) UNATTACHED ROLE SUBGROUP ADD
2) UNATTACHED ROLE SUBGROUP DELETE
3) UNATTACHED ACTOR SUBGROUP ADD
4) UNATTACHED ACTOR SUBGROUP DELETE
5) GROUP DELETE (PAIRED OR UNPAIRED)
6) ACTOR SUBGROUP & ROLE SUBGROUP REPLACE
7) ATTACHED ROLE ADD NO QUESTIONS ASKED
MEMBER NAME DOCGENSP
8) ATTACHED ROLE DELETE
9) ATTACHED ACTOR ADD NO QUESTIONS ASKED
10) ATTACHED ACTOR DELETE
11) PAIRED GROUP ADD / SAME FORMAT AS REPLACE

'SEE' TYPE TITLE LADDER ENTRIES
1) ALL FIRM GROUPS (THOSE THAT ARE NOT BROUGHT FORWARD BY THE
LADDER REFERENCE) WILL REMAIN AS THEY ARE, ALL ITEMS AND GROUPS
BEING CONSIDERED UNSIGNED.
2) A MATCH WILL BE ATTEMPTED ON EACH ROLE IN THE FIRM GROUPS.
IF THE MATCHING ATTEMPT SUCCCEEDS FOR ANY ROLE THEN THAT ROLE
IS DELETED FROM THE QUESTIONABLE SET BEING BROUGHT FORWARD,
IF THE ROLE DELETED IS THE ONLY ROLE IN ITS GROUP THEN THE
ENTIRE GROUP IS DELETED.

CAST GROUP LADDER ENTRIES
1) MUST IMMEDIATELY PRECEDE THE FIRST DASH IN THE GROUP IF THE GROUP
HAS A DASH IN IT (BECAUSE EVERY ITEM FOLLOWING THE CAST GROUP
LADDER REFERENCE IS A SYNTACTIC ACTOR, NO USE CONFUSING PEOPLE).
2) KEYING IS DONE ON ALL SYNTACTIC ROLES IN THE GROUP DOING THE
REFERRING. IF SOME UNMATCHED ROLES ARE STILL LEFT OVER IN THE FIRST
GROUP HAVING A MATCH IN THE SECTION REFERRED TO THEN NO ERROR IS
GENERATED. IF ANY OF THE THE ROLES IN THE REFERRING GROUP
DO NOT FIND A MATCH IN THE FIRST GROUP FOUND HAVING ANY MATCH
IN THE REFERRED TO SECTION THEN AN 'INKY' ERROR MESSAGE IS
('INKY' MEANS 'INCOMPLETE KEYING IN GROUP IN WHICH SOME KEYING
HAS ALREADY BEEN ACHIEVED')
GENERATED. IF NO MATCHES AT ALL ARE FOUND THEN A 'NCGM' ERROR
('NCGM' MEANS THAT NO MATCH FOR ANY ROLE IN THE LADDER GROUP
WAS FOUND IN THE REFERRED TO SECTION)
MESSAGE IS GENERATED. THE SUCCESS OF THIS SCHEME DEPENDS ON
NOT HAVING A SYNTACTIC ROLE MATCHING ANY OF THE ROLES IN THE
REFERRING GROUP PRESENT PRECEDING THE ACTUAL GROUP ON WHICH THE
KEYING IS DESIRED IN THE REFERRED TO SECTION.
RELATIVELY MINOR PROGRAMMING CAN SUBSTANTIALLY ELIMINATE THIS
RESTRICTION.
3) ONLY 'AS' TYPE REFERENCES ARE ALLOWED.
4) TIME ENTRIES WILL BE BROUGHT FORWARD INTACT UNLESS THE CURRENT
GROUP HAS ITS OWN
5) ARE ALLOWED ONLY IN UNTITLED SECTIONS
6) AFTER SUCCESSFUL KEYING IS ACHIEVED, THEN ANY ACTOR IN THE
REFERRED-TO GRP THAT IS MATCHED BY AN ACTOR PRECEDED BY A MINUS
SIGN IN THE REFERRING GRP IS DELETED, ALONG WITH THE ACTOR
PRECEDED BY THE MINUS SIGN IN THE REFERRING GRP, OF COURSE.
IF THERE IS AN ACTOR PRECEDED BY A MINUS SIGN IN THE REFERRING
GRP THAT HAS NO MATCH IN THE REFERRED-TO GROUP THEN A 'CGAD',
'CAST GROUP ACTOR DELETE' ERROR MESSAGE WILL BE GENERATED.
(NOT YET IMPLEMENTED)
7) THE RESULT OF A SUCCESSFUL MATCH IS ALL OF THE SYNTACTIC ACTORS
IN BOTH GROUPS, INCLUDING POSSIBLE REPETITIONS WITH NO QUESTIONS
ASKED, EXCEPT FOR DELETIONS AS NOTED ABOVE. REPETITIONS MAY
DELETED WITH RELATIVELY MINOR PROGRAMMING LATER.

PROGRAMMING SPECIFICATIONS

**************************

SPECIFICATIONS TO BE DEVELOPED
1) SYSTEM FOR TAGGING SUBTITLES TO BE USED IN LADDER KEYING.
2) SYSTEM FOR PATCHING, IF ANY.
NOTES...

1) UNTITLED SECTIONS MAY HAVE 'TITLE' TYPE LADDER REFERENCES. NATURALLY, ONLY ONE UNTITLED SECTION OF ANY ONE TYPE IS ALLOWED IN ANY PERFORMANCE.

2) NO REPEATED TITLES, INCLUDING 'NONE', ARE ALLOWED IN ANY PERFORMANCE (FOR THE SAME TYPE OF SECTION).

3) IN LADDER UPDATES TIME ENTRIES WILL BE BROUGHT FORWARD INTACT UNLESS THE CURRENT GROUP ALREADY HAS A TIME ENTRY.

4) THE MAXIMUM BLKSIZE ALLOWED FOR ANY OF THE PROGRAMS IS GUARANTEED TO BE LESS THAN OR EQUAL TO 3625, HOWEVER THE DATA LENGTH OF BLOCKS IN THE LADDER PROGRAM IS ALLOWED TO BE AS SMALL AS 3593 BYTES INCLUDING CONTROL CHARACTERS. LARGER SECTIONS THAN THIS WILL REQUIRE SPECIAL EDITING AND SMALL TO MEDIUM SIZED CHANGES IN THE EDT, SAVEDT, STRUCTUR, LADDER, & ITEMSGET PROGRAMS.

5) A SLASH WILL BE USED TO INDICATE THE END OF A LINE OF POETRY IN ALL CASES. A SLASH WILL BE USED TO INDICATE THE FIRST LINE OF A POEM. A SLASH HAS NO PROGRAMMING SIGNIFICANCE.

6) IN THE FUTURE ITALICS THAT DO NOT SIGNIFY TITLES WILL PROBABLY BE WIPED OUT.

7) TIME ENTRIES ARE NOT ALLOWED IN PLAY OR AFTERPIECE SECTIONS, BUT AN ERROR MESSAGE WILL NOT NECESSARILY BE GENERATED ON DETECTING A TIME ENTRY IN THESE SECTIONS.

FOR THE MTST SYSTEM THERE ARE 7 PROGRAM STEPS IN THE DATA ENTRY AND RETRIEVAL CYCLE...

1) EDT
2) SAVEDT
3) STRUCTUR
4) LADDER
5) ITEMSGET
6) SORT
7) FORMAT

A PATCH STAGE WOULD PROBABLY WORK BEST FOLLOWING THE LADDER STEPS.
PERHAPS PATCHES COULD BE IN A FORMAT LIKE THE LADDER CHANGES THEMSELVES.

*** DEFINITIONS ***

BALLETT SECTION A TITLED SECTION TAGGED WITH THE SMALL LETTER 'B'. ITS DATA SHOULD COME FROM A DANCE BOX.

CAST GROUP IS A CHAR STRING IN THE CAST LIST PART OF A SECTION. IT IS DELIMITED ON THE RIGHT EITHER BY THE END OF THE SECTION OR BY A SEMICOLON. IT IS DELIMITED ON THE LEFT BY EITHER THE BEGINNING OF THE CAST LIST OR THE END OF THE PREVIOUS GROUP (BY A SEMICOLON).

CAST GROUP LADDER ENTRY A LADDER ENTRY IN AN UNTITLED SECTION THAT FOLLOWS A SYNTACTIC ROLE IN A CAST GROUP AND IMMEDIATELY PRECEDES THE FIRST DASH IN THE GROUP IF THE GROUP HAS A DASH.

CAST LIST ITEM TITLE LADDER ENTRY ('AS' OR 'SEE'), CAST GROUP LADDER ENTRY, CAST GROUP TIME ENTRY, SYNTACTIC ROLE, OR SYNTACTIC ACTOR.

CAST LIST ENTRY CAST GROUP.

CAST LIST TIME ENTRY AN ITEM IN A CAST GRP PRECEDING ALL ROLES AND ACTORS IN THE GRP. IT IS DELIMITED ON THE RIGHT BY A COLON-BLANK. IT CONSISTS OF THE COLON-BLANK AND USUALLY SOME OTHER CHARACTERS FROM THE SET, '0123456789ABCDTIVX', WHERE A, B, D, AND T ARE SMALL LETTERS. ALSO CALLED A CAST GROUP TIME ENTRY.

EXTRANEOUS TEXT A) COMMENT SECTIONS
B) TEXT IN OTHER SECTIONS THAT IS DELIMITED AS EXTRANEOUS TEXT.

MONOLOGUE WITH PARTS A TITLED SECTION TAGGED WITH THE SMALL LETTER 'U'.

OPERA SECTION A TITLED SECTION TAGGED BY THE SMALL LETTER 'O'. ITS DATA SHOULD COME FROM A SONG BOX IN THE CALENDER.

PERFORMANCE ALL OF THE SECTIONS STARTING WITH A PLAY SECTION (EITHER REAL OR SPECIAL) AND ENDING EITHER WITH END OF DATA OR START OF ANOTHER PLAY SECTION. ALTERNATIVELY ALL OF THE SECTIONS FOR ONE THEATRE ON ONE DATE.

SECTION ALL CHARACTERS BETWEEN ONE BLANK-ASTERISK-SMALL LETTER SEQUENCE AND THE NEXT SUCH SEQUENCE, EXCEPT THAT THE LAST SECTION IN A BLK ENDS AT THE END OF THE BLK. THE FIRST SECTION IN A BLK STARTS WITH THE FIRST BLANK-ASTERISK-SMALL LETTER SEQUENCE IN THE BLK. ALL CHARACTERS OF LOGICAL DATA PRECEDING THIS SEQUENCE ARE IGNORED, EXCEPT FOR ILLEGAL CHAR CHECKS. IN MTST INPUT THE '*' IS REPLACED BY THE PREFIX. IN SCANNER INPUT THE BLANK PRECEDING THE ASTERISK IS NOT ALWAYS REQUIRED, ALTHOUGH TO BE PROPER IT SHOULD ALWAYS BE THERE.

SECTION HEADER THE ITEMS FOLLOWING THE SECTION DELIMITER CHARACTER AND PRECEDING THE CAST LIST, IF ANY. FOR UNTITLED SECTIONS THIS IS THE SECTION TYPE LETTER. FOR TITLED SECTIONS THE HEADER STARTS WITH THE SECTION TYPE LETTER AND ENDS WITH THE FIRST OCCURRENCE OF ANY OF THE FOLLOWING ...

1) END OF THE SECTION.
2) PERIOD-BLANK-BLANK 3 CHAR SEQUENCE, '.  '.
3) QUESTION MARK-BLANK-BLANK 3 CHARACTER SEQUENCE, '?  ?'.
4) EXCLAMATION POINT-BLANK-BLANK 3 CHAR SEQUENCE, '!  !'.

SECTION TYPE LETTER (SECTYPE) THE CHARACTER FOLLOWING THE BLANK-ASTERISK OR BLANK-PREFIX DEFINING THE START OF A SECTION. THIS CHARACTER SHOULD BE A SMALL LETTER DESIGNATED TO REPRESENT A PARTICULAR TYPE OF SECTION.

PERFORMANCE DATE ENTRY IN A PLAY SECTION 1 TO 3 NUMBERS SEPARATED FROM EACH OTHER AND ALL OTHER ITEMS BY AT LEAST ONE BLANK. THE 1 TO 3 NUMBERS ARE CONSIDERED ONE ITEM, AND HENCE ANY PAGE ENTRY MUST PRECEDE ALL OF THEM. IF PRESENT THE DATE MUST LIE BETWEEN THE SECTION TYPE LETTER AND THE THEATRE, IF ANY (ABSENCE OF A THEATRE IN A PLAY SECTION IS AN ERROR).

THEATRE ENTRY A CHARACTER STRING IN THE HEADER PART OF A PERFORMANCE SECTION THAT FOLLOWS THE DATE ENTRY, IF ANY, SEPARATED FROM IT BY AT LEAST ONE BLANK, AND PRECEDES THE TITLE, IF ANY, SEPARATED FROM IT BY AT LEAST ONE BLANK. THE THEATRE BEGINS WITH THE FIRST NONBLANK CHARACTER, EXCEPTING PERIODS AND CERTAIN OTHER PUNCTUATION CHARACTERS, FOLLOWING THE DATE ENTRY, IF ANY. THE THEATRE ENDS WITH THE FIRST BLANK FOLLOWING ITS START, OR ELSE ENDS WITH THE END OF THE SECTION, WHICHEVER COMES FIRST. THE LEGAL CHARACTERS FOR A THEATRE ARE THE SMALL LETTERS AND THE APOSTROPHE.

TIME ENTRY TITLE TIME ENTRY OR CAST LIST TIME ENTRY.

TITLE AREA FOR A PLAY SECTION THE AREA FOLLOWING THE THEATRE ENTRY AND ENDING WITH THE END OF THE SECTION HEADER. FOR ANY OTHER TITLED SECTION THE AREA BETWEEN THE SECTYPE LETTER AND END OF SECTION HEADER.

FULL TITLE STRING A CHARACTER STRING IN THE TITLE AREA. IT STARTS WITH THE FIRST CHARACTER IN THE AREA THAT IS
MEMBER NAME DOCGENSP

NOT A PERIOD, BLANK, COMMA, SEMICOLON, QUESTION MARK,
MINUS SIGN, OR EXCLAMATION POINT. IT ENDS WITH THE END
OF THE TITLE AREA.

TITLE  
(SECTION TITLE) FOR PLAY AND AFTERPIECE SECTIONS THIS
IS THE PART OF THE FULL TITLE STRING PRECEDING THE SUBTITLE
IN THE STRING, IF ANY. FOR OTHER TITLED SECTIONS THIS IS
THE PORTION OF THE FULL TITLE FOLLOWING THE TIME ENTRY, IF
ANY, AND PRECEDING THE SUBTITLE, IF ANY.
HOWEVER ONLY 120 CHARMS ARE PUT OUT FROM THE STRUCTUR PROGRAM,
AND ONLY 83 ARE AVAILABLE IN SORTS.

TITLE TIME ENTRY  A CHARACTER STRING IN THE FULL TITLE OF
A TITLED SECTION. IF PRESENT IT STARTS WITH THE FULL
TITLE STRING AND ENDS WITH THE FIRST 2 CHARACTER SEQUENCE
OF COLON-BLANK, ' : ', IN THE FULL TITLE STRING. THE
STRING ITSELF MUST BE A LEGITIMATE CAST LIST TIME ENTRY
IN OTHER RESPECTS.

TRICK SECTION  A TITLED SECTION TAGGED BY THE SMALL LETTER 'T'. ITS
DATA SHOULD COME FROM TITLED ENTERTAINMENT BOXES.

TITLED SECTION  A SECTION THAT IS SUPPOSED TO HAVE A TITLE.
AT PRESENT THESE SECTIONS ARE TAGGED BY ...
A, P, I, O, T, U. DISCOUNTING PAGE ENTRIES, ALL THESE SECTIONS
SHOULD HAVE A TITLE OF AT LEAST THE SPECIAL VARIETY.

STRUCTURED TEXT  TEXT THAT IS NOT EXTRANEOUS TEXT.

STRUCTURED SECTION ANY KIND OF SECTION EXCEPT A COMMENT SECTION.

TITLE LADDER ENTRY  A LADDER ENTRY IN EITHER A TITLED OR UNTITLED
SECTION THAT IS NOT PRECEDED BY ANY CAST GROUP ITEM. ..
THERE ARE TWO TYPES .. 'SEE' & 'AS'.

SYNTACTIC ROLE IS ANY ITEM THAT IS ..

1) IN A CAST GROUP THAT HAS A DASH OR CAST GROUP LADDER
ENTRY IN IT.
2) TO THE LEFT OF ALL DASHES AND THE CAST GROUP LADDER
ENTRY, IF ANY, IN ITS GROUP.
3) IS NOT A TIME ENTRY.
4) IS NOT A PAGE ENTRY.
5) IS NOT A LADDER ENTRY.

SYNTACTIC ACTOR IS ANY ITEM IN A CAST LIST GROUP THAT ..

1) IS TO THE RIGHT OF THE 1ST DASH IN THE GROUP IF THE
GROUP HAS A DASH IN IT, OR IS TO THE RIGHT OF THE
CAST GROUP LADDER ENTRY, IF ANY, IN A GRP THAT
HAS NO DASH.
3) IS NOT A TIME ENTRY.
4) IS NOT A LADDER ENTRY.
5) IS NOT A PAGE ENTRY.

THE RIGHT HAND DELIMITER OF A SYNTACTIC ACTOR MAY BE ..
1) A SEMICOLON.
2) END OF GROUP (EITHER SEMICOLON OR END OF SECTION).
3) COMMA.

*** STANDARD DATA FILES ***

THERE ARE 11 BASIC KINDS OF FILES ENCOMPASSING 7 GENERAL
DATA FORMATS IN USE BY THE LSP INPUT SYSTEM. THE 11 TYPES OF
FILE ARE NAMED AND BRIEFLY DESCRIBED BELOW. MORE DETAILED
DESCRIPTIONS ARE GIVEN IN THE INDIVIDUAL PROGRAM WRITEUPS.

LSPIC ORIGINAL DATA FILE OF SCANNER OUTPUT. LSPIC FILES
ARE INPUTS TO THE ICISCAN, ICIPRONT, AND ICIFIX PROGRAMS,
AND OUTPUT FROM THE ICIFIX PROGRAM.

LSPCR CORRECTION TEXT PORTION OF AN LSPIC FILE. FOR USE WITH
MEMBER NAME DOCGENSP

WITH ICIFRON. ALSO PRODUCED BY THE SLASH PROGRAM FROM
CARD FORMAT INPUT.

LSPDT DATA TEXT PORTION OF AN LSPIC FILE. INPUT FOR
ICISCAN OR ICIFRON OR ICIFIX. OUTPUT FROM ICIFIX OR
SCANNER (OR LSPCNLSL ETC.).

LSPMT ORIGINAL DATA FILE. LSPMT IS AN INPUT FOR THE SAVEDT PROGRAM,
IF IT IS DESIRED TO CREATE A BACKUP OF THE INPUT THEN
AN LSPMT FILE CAN ALSO BE OUTPUT FROM THE SAVEDT PROGRAM.
SIMILARLY LSPMT FILES ARE BOTH INPUT AND OUTPUT FOR EDT.

LSPCL STANDS FOR 'CLEANED'. THIS IS OPTIONAL INPUT/OUTPUT OF
THE ICISCAN PROGRAM. IT IS A LINE BY LINE FORM OF TEXT
THAT HAS BEEN PUT THROUGH THE LINE READIN PROCESS AND
CLEANED OF 'AT' SIGNS AND TYPIST ENTRIES ETC. EACH LINE
IS HEADED BY THE FOLLOWING PIECES OF INFORMATION IN A
FIXED FORMAT .

1) TYPIST'S LETTER, 1 CHAR.
2) PAGE NUMBER, 4 CHAR.
3) LINE NUMBER WITHIN PAGE, 5 CHAR.
4) ABSOLUTE LINE NUMBER, 6 CHAR.
5) LENGTH OF LINE, 4 CHAR.

THUS A LSPCL FILE IS SUITABLE FOR USE AS A STREAM FILE
ALLOWING EASY MANIPULATION IN A VARIETY OF
WAYS BY A FORTRAN PROGRAM, EITHER BATCH OR RAX.

LSPPU STANDS FOR 'PURE'. THIS IS THE MAIN OUTPUT OF SAVEDT OR ICISCAN
AND INPUT TO THE STRUCTUR PROGRAM. IT IS TEXT CLEANED OF COMMENT
SECTIONS, AND EXTRANEOUS TEXT, AS WELL AS RUBOUT CHAR,
ILLEGAL CHARs, AND CERTAIN CONTROL TEXT. EACH BLK SHOULD BE
1 OR MORE COMPLETE SECTIONS, AND EACH BLK SHOULD CONTAIN
ONLY COMPLETE SECTIONS, NOT JUST PART OF A SECTION.

LSPST STANDS FOR STRUCTURED TEXT. IT IS OUTPUT FROM THE STRUCTUR
PROGRAM, AND INPUT TO THE LADDER PROGRAM. THE DATA IN THIS
FILE CONSISTS OF TAGGED GROUPS AND ITEMS, ONE SECTION PER BLK.
THIS IS A REGIONAL(3) U FORMAT KEYED SEQUENTIAL FILE.

LSPSS STANDS FOR 'STRUCTURED SEQUENTIAL', LIKE LSPST, EXCEPT
THAT IT HAS THE DIRECT ACCESS KEY OF THE LSPST FILE APPENDED
TO THE FRONT OF THE BLK, AND IT IS PADDED IN FRONT OF THE
KEY WITH 2 BLANKS TO MAKE A MINIMUM BLKSIZE OF 18 BYTES.
THIS FORMAT IS INTENDED FOR STRUCTURED OUTPUT TO TAPE.
THIS IS AN ORDINARY UNKEYED U FORMAT SEQUENTIAL FILE.

LSPLD STANDS FOR 'LADDER'. THIS IS OUTPUT FROM THE LADDER PROGRAM AND
AND INPUT TO THE ITEMGET PROGRAM. IT IS A KEYED DIRECT
ACCESS FILE HOLDING SECTIONS WITH LADDER
REFERENCES CONVERTED TO EXPLICIT CAST LISTS AND TITLES.
LSPLD FILES ARE VERY SIMILAR TO LSPST FILES.

LSPLS STANDS FOR 'LADDER SEQUENTIAL'. JUST LIKE LSPLD EXCEPT THAT,
AS IN THE LSPSS FILE, THE KEY IS APPENDED TO
THE FRONT OF THE BLK AND PRECEDED BY 2 BLANKS TO MAKE THE
18 BYTE MINIMUM BLKSIZE FOR TAPE. THIS IS AN ORDINARY
U FORMAT SEQUENTIAL FILE.

LSPIT STANDS FOR 'ITEMS'. IT IS OUTPUT FROM THE ITEMGET PROGRAM
AND INPUT TO THE SORT STEP. THE FORMAT IS FIXED
UNBLOCKED KEYED REGIONAL(3) DIRECT ACCESS,
AND EACH RECORD USUALLY CORRESPONDS TO A SYNTACTIC ROLE/ACTOR
PAIR. HOWEVER THE RECORD MAY HOLD AS LITTLE AS THE SECTION
TYPE, DATE, AND THEATRE.

LSPIS STANDS FOR 'ITEMS SEQUENTIAL'. SIMILAR TO LSPIT, BUT
INTENDED FOR UNKEYED SEQUENTIAL TAPE OUTPUT FROM THE
ITEMGET PROGRAM. THIS IS AN UNBLOCKED F FORMAT FILE.
MEMBER NAME DOCCENSP
LSPSR STANDS FOR 'SORTED'. OUTPUT FROM THE SORT PROGRAM.
SAME FORMAT AS LSPIS, EXCEPT THAT MAY BE BLOCKED, IF
BLOCKED, IS USUALLY BY A FACTOR OF 19. INPUT FOR THE
FORMAT PROGRAM.
LSPIX SIU INDEX ENTRIES. OUTPUT FROM THE SAVEDT PGM. AT PRESENT
ONLY CONTAINS THE INDEX ENTRY ITSELF. SHOULD ALSO CONTAIN
THE PAGE NUMBER, DATE, AND TAG. ICISCAN CAN EASILY BE
ALTERED TO PUT OUT LEGITIMATE SIU INDEX ENTRIES ENCOUNTERED
IN APPROPRIATE CONTEXTS.

1 CURRENT STATUS OF PROGRAMMING
****************************************

PROGRAMMING TO BE DONE ..
1) INDIRECT SORT SYSTEM.
2) OPTIONAL CORRECTION OF ROLES OR ACTORS THAT START WITH 'END' ETC.
3) IMPLEMENT QUESTION MARK AS TITLE DELIMITER FOR TITLED SECTIONS.
4) ALTER LADDER TO PREVENT CGLE UPDATES FROM HAVING QUESTION
MARKS APPENDED TO THEM.
5) MINOR IMPROVEMENTS IN ICIFRONT.
6) PUT RECORD COUNT IN FRMAT, OPTIONAL PRINT OUTPUT,
    AND OPTIONAL CHECK FOR IDENTICAL RECORDS.

STATUS OF PROGRAMS ..
CARDIN DISCONTINUED
EDT DONE
SAVEDT DONE
ICIFIX DONE
ICIFRONT MAINT STAGE
ICISCAN MAINT STAGE
STRUCTUR MAINT STAGE
LADDER MAINT STAGE
ITEMGET MAINT STAGE
FRORMAT MAINT STAGE
LSPRINT DONE
DOCPRENT DONE
PLIST DONE
TRT DONE
MAP DONE
COPYCAT DONE
ICICORDER NOT DONE
SLASH MAINT STAGE

DOCUMENTATION ..
PROGRAMMING SPECS MAINT STAGE
INPUT SPECS MAINT STAGE
GENERAL HALF DONE
BUG NOTES NOT DONE
CHARACTER SET TABLES DONE
OPERATION INSTRUCTIONS MAINT STAGE
LISTINGS DONE
RECOMMENDATIONS NOT DONE

PROCEDURES ..
LSPCNLSL DONE
LSPICFIX DONE
LSPSLASH NOT DONE
LSPFRONT DONE
LSPSCLIN DONE
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MEMBER NAME DOCSFORM

**** ORIGINAL MAGTAPE INPUT FROM SCANNER ****

THE SCANNER COMPANY PRODUCES NONLABELLED TAPE FORMATTED THUS ..

DBR+ (RECFM=FB, BLKSIZE=800, LRECL=80).

EACH LOGICAL RECORD NOMINALLY CORRESPONDS TO A LINE OF TEXT
ON THE CHINA DATA SHEETS. THERE MAY BE AN OCCASIONAL EXTRA
LINE OF 80 BLANKS, USUALLY OCCURRING AT THE END OF A PAGE.
EACH PAGE IS SUPPOSED TO HAVE 30 LINES. EACH BLK OF TEN 80 BYTE
RECORDS IS ONE THIRD OF A PAGE. IF THERE IS AN EXTRA BLANK LINE
THEN THE OTHER LINES FOLLOWING IT ARE PUSHED DOWN EVEN INTO THE
NEXT BLK IF NECESSARY TO KEEP THE BLKSIZE AT 800.

THE TYPED PORTION OF EACH LINE IS NOMINALLY THE FIRST 75
CHARS OF THE LINE, THE REMAINING 5 CHARBS BEING BLANK ON THE CHINA
DATA SHEETS EXCEPT IN CASE OF ERROR. AFTER SCANNING TO TAPE
THIS IS STILL GENERALLY TRUE, BUT OFTEN A TYPED DOUBLE QUOTE CHAR
IS SCANNED AS 2 APOSTROPHES, THUS CAUSING THE 75TH TYPED CHAR TO
SPILL OVER INTO COLUMN 76. TO SOLVE THIS PROBLEM ANY PAIR OF
CONTIGUOUS APOSTROPHES FOUND ON A LINE IS REPLACED WITH A
DOUBLE QUOTE CHAR BY THE ICISCAN PROGRAM. OCCASIONALLY NONBLANK
CHARS ARE PUT INTO COLUMN 76 OR BEYOND FOR OTHER REASONS, ALL
ERRORS OF SOME SORT. THESE ERRORS ARE ACCEPTED UP TO THE LAST
NONBLANK CHAR ANYWAY. NO ERROR MESSAGE IS GENERATED FOR THIS.

THE CHARACTERS ARE STANDARD EBCDIC EXCEPT FOR THE FOLLOWING ..

THE BRITISH POUND SIGN IS AN EBCDIC NUMBER SIGN, HEX '7B'.
IT IS PRINTED BY THE LSPRINT SN TABLES AS AN 'L' OVERPRINTED
ON A MINUS SIGN. IN THE ICIFIX PROGRAM THE 1052 PRINTS IT AS JUST WHAT
IT IS INTERNALLY, THE NUMBER SIGN. NEITHER THE HN NOR THE SN
CHAIN CAN PRINT THE NUMBER SIGN CHARACTER.

THE LEFT AND RIGHT BRACKETS ARE HEX '9D' AND 'BD' RESPECTIVELY.
THEY PRINT AS THE PARENTHESES OVERPRINTED WITH THE MINUS SIGN
USING THE LSPRINT SN TABLES. ON THE 1052 THEY ARE PRINTED AS
THE 'LESS THAN' AND 'GREATERTHAN' SYMBOLS RESPECTIVELY BY ICIFIX.

THE CHARACTER THE SCANNER COMPANY IS SUPPOSED TO USE FOR
NONRECS IS THE HEX '00'. THIS IS PRINTED BY THE SN LSPRINT TABLES
AS A ZERO OVERPRINTED ON THE PREFIX CHAR. OTHER ILLEGAL CHAR
PRINT AS THE USUAL 'H' ON 'I' CHAR.
MEMBER NAME  DOCOLSPS
OPERATING THE LONDON STAGE PROJECT INPUT SYSTEM

SUMMARY OF STEPS

*** INITIAL PROCESSING ***

LSPBAKUP  TO CREATE SL BACKUP OF NL TAPE FROM SCANNER COMPANY.
ICIFIX  TO PRODUCE A FILE OF DATA TEXT FROM THE SL BACKUP,
DELETE BLANK LINES, AND LOCATE BAD TYPIST ENTRIES.
ICIFIX  TO PRODUCE A FILE OF CORRECTION TEXT FROM THE SL,
BACKUP, DELETING BLANK LINES.
LSPRINT  TO LIST THE FILE OF CORRECTION TEXT.
ICISCAN  TO PRINT ONTO TAPE A LIST/LOG OF THE DATA TEXT AND TO
PRODUCE PURE FILE OUTPUT FOR THE STRUCTUR PROGRAM.
LSPRINT  TO LIST ICISCAN'S LIST/LOG PRINTOUT WITH OVERPRINTING
ON THE SN CHAIN FOR ERROR ANALYSIS AND CROSS REFERENCE.
STRCT  FOR LOCATING DCHG ERRORS AND SEASON CHANGES THAT
DON'T WORK RIGHT.
LADDR  TO LOCATE ANY SINGLE ERRORS THAT CAUSE MANY ERROR
MESSAGES, BUT ARE EASY TO FIX. THIS STEP SHOULD
NOT BE RUN UNLESS THE STRCT STEP HAS NO BAD DCHG ERRORS,
AND NO SEASON CHANGES MISSED.

*** FIRST CYCLE ***

ANALYSIS  (DONE BY THE OPERATOR)  TO LOCATE IMPORTANT ERRORS,
AND DETERMINE REMEDIAL ACTION FOR THEM.
THE FOLLOWING SPECIAL AREAS FOR THE OPERATOR TO
CHECK ARE LISTED IN ORDER OF IMPORTANCE .
1) THE FIRST LINE.
2) THE ENDING OF EACH SEASON EXCEPT THE LAST IN THE RUN.
3) THE START OF EACH MONTH OR YEAR.
4) TYPIST ENTRIES.
5) SEASONS NOT STARTING WITH A PLAY SECTION. IN THIS
EVENT THE ITEMGET PROGRAM MAY BOMB OUT, BUT LADDR
SHOULD WORK PRETTY WELL.
ICIFIX  TO FIX SERIOUS ERRORS, AND POSSIBLY OTHER ERRORS,
DISCOVERED BY ICIFIX, ICI SCAN, STRCT, AND POSSIBLY LADDR.
ICIFRONT  (AN OPTIONAL STEP) TO APPLY CORRECTIONS TO THE DATA TEXT.
(NEITHER USING LPSCCLIN FOR CLEANED FORMAT INPUT OR
LS PCIe FOR SCANNER FORMAT DATA TEXT) TO CHECK FOR
SERIOUS ERRORS, ESPECIALLY FROM APPLICATION OF CORRECTIONS.
OPTION 6 SHOULD BE USED INSTEAD OF OPTION 3.
STRCT  SAME AS FOR INITIAL PROCESSING STAGE.
LADDR  SAME AS FOR INITIAL PROCESSING STAGE.

*** SECOND (& LATER) CYCLES ***

ANALYSIS  AS IN FIRST CYCLE, BUT MAY INVOLVE DEVELOPMENT OF FIXES
ON CARDS FOR CLEANED FORMAT OUTPUT FROM ICIFRONT, TO
BE CORRECTED AGAIN WITH ICIFRONT.
ICIFIX  FOR DATA TEXT. AS IN FIRST CYCLE, BUT MAY BE SUPERSEDED
BY USE OF SLASH PROGRAM.
ICIFIX  FOR CORRECTION TEXT. MAY BE SUPERSEDED BY SLASH PROGRAM.
SLASH  MAY BE USED TO CONVERT CORRECTION TEXT ON CARDS TO
PROPER FORMAT INPUT TO ICIFRONT'S CORRECTION TEXT FILE.
ICIFRONT  MAY BE USED (OR NOT) EITHER WITH SLASH OUTPUT OR
ORIGINAL CORRECTION TEXT, EITHER WITH CLEANED FORMAT
INPUT OR SCANNER FORMAT INPUT (4 COMBINATIONS).
MEMBER NAME  DOCOLSPS  
ICISCAN  SAME AS FIRST CYCLE.  
STCRT  SAME AS OTHER RUNS.  
LADDR  SAME AS OTHER RUNS.

*** RETRIEVAL STEPS ***
ITEMS  TO SELECT SOME OR ALL OF SORT RECORDS REPRESENTED
      BY LADDR OUTPUT.  
SORT  TO SORT SORT RECORDS IF NECESSARY.  
MERGE  (ACTUALLY PART OF SORTING PROCESS) TO COMBINE OUTPUT
      OF SEVERAL SORT RUNS IF NECESSARY.  
FRMAT  TO LIST SORT RECORDS.

**** INITIAL PROCESSING SEQUENCE ****

WHEN THE ORIGINAL MAGTAPE ARRIVES FROM THE SCANNER COMPANY
THE FIRST THING TO DO IS TO MAKE A BACKUP COPY ON A STANDARD LABELLED
TAPE USING THE LSPCNLSL PROCEDURE. BE SURE TO TAKE THE WRITE
RING OFF THE SCANNER COMPANY'S TAPE BEFORE USING IT, FOR SAFETY.
THREE PARAMETERS MAY HAVE TO BE SPECIFIED ON THE EXEC CARD
IN THE USUAL CASE ..
1) OUTVOL= IS THE VOLUME SERIAL NUMBER OF THE STANDARD
   LABELLED OUTPUT TAPE. DEFAULT IS 'A'.
2) OUTSEQ= IS THE OUTPUT FILE SEQUENCE NUMBER. DEFAULT IS 1.
3) OUTDSN= IS THE DATASET NAME OF THE OUTPUT FILE. THE
   DEFAULT IS 'LSPIC'.

LSPIC FILE NAMES ARE DESIGNED TO DESCRIBE THE INFORMATION IN
THE FILE. THEY ARE 8 CHARACTERS LONG. EACH CHARACTER HAS
THE FOLLOWING MEANING ..
(1) THE YEAR IN WHICH THE DATA IS STORED.
   A=71, B=72 ETC.
(2) THE MONTH IN THIS YEAR IN HEX, 5 = MAY, C = DEC., ETC.
(3) THE DAY OF THE MONTH BY THE FOLLOWING SYSTEM .. 1-9 = 1-9,
   A=10, B=11, ETC.
(4-6) THE LAST THREE DIGITS OF THE YEAR IN WHICH THE DATA IN THE
     FILE STARTS.
(7) THE MONTH IN WHICH THE DATA STARTS, USING THE SAME CODES, AS
    AS FOR CHARACTER (2) ABOVE.
(8) THE DAY ON WHICH THE DATA STARTS, SAME CODES AS (3) ABOVE.

OF COURSE USE OF THIS NAMING CONVENTION IS NOT REQUIRED, IT IS
ONLY INTENDED FOR SAFETY AND CONVENIENCE IN KEEPING TRACK OF
TAPES. IF THE USER FINDS IT INCONVENIENT THEN IT SHOULD BE IGNORED.

THE SCANNER COMPANY'S TAPE SHOULD BE MOUNTED ON UNIT 182,
AND THE OUTPUT TAPE ON UNIT 180. THESE CAN BE ALTERED BY USING
INUNIT= AND OUTUNIT= ON THE EXEC CARD. EXAMPLE
//JJKK EXEC LSPCNLSL,OUTVOL=LSP009,OUTDSN=A4B777C6,INUNIT=181
HERE THE INPUT UNIT IS 181 INSTEAD OF THE DEFAULT 182, AND
THE OUTSEQ= PARAMETER WAS NOT NEEDED SINCE THE FILE SEQUENCE
WAS TO BE 1.
AFTER THE BACKUP STEP IS COMPLETED REMOVE THE SCANNER
COMPANY'S TAPE. KEEP IT UNTIL 2 OTHER COPIES OF ITS DATA HAVE
BEEN MADE AND CHECKED.

AFTER THE BACKUP, THE NEXT STEP IS TO SEPARATE THE CORRECTION
TEXT FROM THE DATA TEXT, CREATING TWO NEW FILES WITH THE
ICIFIX PROGRAM. WHEN CREATING THE DATA TEXT ENABLE TYPIST ENTRY
CHECKING AND LEAVE A RECORD OF BAD PAGE ENTRIES ON THE CONSOLE
PRINTOUT. AT THIS POINT
MEMBER NAME DOCOLSPS

DO NOT ALTER THE TEXT IN ANY WAY EXCEPT FOR SEPARATING THE
TWO KINDS OF TEXT AND POSSIBLY DELETING BLOCK FILLER AT THE
END OF THE FILE. THE REASON FOR NOT TAMPERING IS TO PRESERVE
THE ORIGINAL DATA TEXT FOR ACCOUNTING PURPOSES.

ICIFIX OPERATION IS DESCRIBED IN THE ICIFIX PROGRAM WRITEUP.
WHEN A REVISION IS MADE OF A BATCH THEN THE DATE OF STORAGE,
GIVEN IN COLUMNS 1-3 OF THE NEW DSN, SHOULD REFLECT THE DATE OF
THE REVISION.

AFTER SEPARATION PRINT THE CORRECTION TEXT USING THE LSPRINTS
PROCEDURE WITH OPT=DIRECTSN. IF YOU ARE ANXIOUS TO SEE THE
ORIGINAL DATA TEXT THEN, OF COURSE, GO RIGHT TO THE ICISCAN
LIST/LOG STEP.

THE VERY FIRST ICISCAN RUN, THE LIST/LOG STEP, IS DONE USING
THE LSPLSCAN PROCEDURE, WHOSE COMMONLY REQUIRED PARAMETERS ARE ..
1) INVOL INPUT VOLUME LABEL.
2) INSN ON INPUT DATASET NAME.
3) INSEQ INPUT FILE SEQUENCE NUMBER, DEFAULT IS 1.
4) OUTSEQ OUTPUT FILE SEQUENCE NUMBER, DEFAULT IS 1.

THE RUN DECK SHOULD HAVE 2 DD CARDS FOR SYSPRINT, 1 FOR THE
PRINTER DIRECTLY, THE OTHER FOR OUTPUT TO LSP002 ON UNIT 181.
PLACE THE ONE THAT YOU WANT TO BE USED AHEAD OF THE OTHER ONE
IN THE DECK. IF YOU ARE USING TAPE FOR SYSPRINT THEN IT IS
SOMewhat MORE EFFICIENT TO PLACE THE LSPRINT STEP IMMEDIATELY
AFTER THE ICISCAN STEP AND HAVE THE TAPE PRINTED IMMEDIATELY.

IN GENERAL A TAPE SHOULD BE USED FOR SYSPRINT ON THE VERY
FIRST RUN. THIS SPEEDS UP PROCESSING AND MAKES POUND SIGNS,
BRACKETS, AND EQUAL SIGNS VISIBLE WHEN LSPRINT PRINTS THE TAPE.
THIS WILL ALSO HELP LOCATE ANY ILLEGAL CHARACTERS THAT MAY
BE PRESENT. THE PRINT FILE LISTS, IN ADDITION TO THE RAW
INPUT TEXT, ALL ERROR MESSAGES, THE ABSOLUTE LINE NUMBER OF EACH
LINE, AN APPROXIMATE APPARENT DATE ASSOCIATED WITH EACH LINE,
AND THE APPROXIMATE STRCT/LADDER/ITEMS INPUT BLK NUMBER ASSOCIATED
WITH EACH LINE. THE TYPED PAGE NUMBER AND LINE NUMBER CAN
EASILY BE DETERMINED BY INSPECTION OF THE TEXT. IN SHORT THIS
LISTING PROVIDES A CROSS-REFERENCE TOOL CLOSELY CONNECTING
SUCH DIVERSE ENTITIES AS THE ORIGINAL DATA IN THE LONDON STAGE
ITSELF AND THE FINAL SORTED FORMATTED OUTPUT. FORMATTED OUTPUT
HAS GONE THROUGH AT LEAST 6 MAJOR TRANSFORMATIONS SINCE ITS
'ORIGIN' IN THE LONDON STAGE.

PRINTING OF ICISCAN'S LIST/LOG SHOULD BE DONE WITH THE
LSPRINTS PROCEDURE USING OPT=PRINTSN.
IT IS ALLRIGHT IF THE PRINTER IS ALLOWED TO RUN OUT OF
PAPER IN THIS STEP. THE OUTPUT WILL BE BULKY ANYWAY, BUT THE
NUMBER OF PIECES SHOULD NOT EXCEED 3 IF POSSIBLE. THE PRINTOUT
IS INTENDED MAINLY FOR REFERENCE IN THE ERROR CORRECTION PROCESS.

IF THE QUALITY IS NOT TOO LOW THEN, AFTER CORRECTION NOTES
ETC. HAVE BEEN MADE ON IT, THIS PRINTOUT SHOULD BE SENT TO DR.
SCHNEIDER. SCRAP PAPER SHOULD BE USED FOR THIS PRINTOUT IF
THERE ARE ANY SIZEABLE CHUNKS AVAILABLE.

HERE IS A LIST OF ITEMS REQUIRING SPECIAL ATTENTION IN
RUNNING STRCT, ESPECIALLY FOR THE FIRST TIME ON A NEW BATCH . .

1) CHECK THE MONTH ABBREVIATIONS USED IN LADDER REFERENCES,
AND CHANGE THE MONSTR CARDS ACCORDINGLY. SOME PARTS USE 'APR'
WHILE OTHERS USE 'APRIL', ETC. (MARCH, APRIL, MAY, JUNE, JULY,
AND AUGUST ARE THE ONES TO WATCH).


2) IT IS IMPORTANT TO BE SURE ABOUT THE SEASON ENDS IF YOU HOPE
TO RUN THE OUTPUT THROUGH LADDR. ONE LIKELY ERROR IS COUNTING
SECTIONS IN THE LAST PERFORMANCE OF A SEASON THAT ARE NOT PUT
OUT BY ICISCAN. ANOTHER IS OVERLOOKING THE DELETION OF AN ASTERISK
BY AT SIGNS. ILLEGAL SECTIONS THAT HAVE CAPITAL SECTYPE LETTERS
ARE PUT OUT BY ICISCAN AS REGULAR SECTIONS WITH LEGAL SMALL
LETTERS AS LONG AS THE SMALL LETTER IS THAT OF A LEGAL SECTYPE
THAT HAS BEEN SELECTED ON THE OPTION CARD.

3) CHECK THE JCL CURSORITY TO MAKE SURE NO UNWANTED OVERRIDE CARDS
ARE THERE. STRICT AND LADDR ARE SOMEWHAT DANGEROUS IN THIS
RESPECT SINCE THEY ARE EXECUTED BY STRAIGHT JCL, NOT PROCEDURES.
SPECIAL CARDS LEFT OVER FROM THE PREVIOUS RUN ARE LIKELY TO CAUSE
TROUBLE.

THE LADDER STEP SHOULD NOT BE RUN UNTIL THE STRUCTURE STEP
PRODUCES NO BAD 'DCHG' MESSAGES. THIS IS ONE IN WHICH THE DATE
IS OFF BY 5 DAYS OR MORE. ADDITIONALLY ALL SEASON CHANGES MUST
OCUR PROPERLY. A MERE CHANGE IS NOT ENOUGH, IT MUST BE ENTIRELY
CORRECT.

*** ERROR CORRECTION CYCLES ***

AFTER THE FIRST CYCLE THE ERROR CORRECTION LOOP ANALYSIS
STEP MAY INCLUDE ANALYSIS OF CORRECTION TEXT ERRORS AND A
COMPARISON OF ICISCAN AND/OR STRICT ERRORS IN USING ICIFRONT
VS. NOT USING IT. THE MOST LIKELY SERIOUS ERROR IN CORRECTION
TEXT INVOLVES A CORRECTION SPECIFICATION THAT INDICATES AN
INCORRECT TYPIST OR ADVANCES THE PAGE NUMBER TOO MUCH. THIS
CAN USUALLY BE SPOTTED WHEN THERE ARE VERY MANY 'CORRECTIONS'
DONE TO ONE LINE IN THE UPDATE LOG PRINTOUT, OR WHEN THE PROGRAM
STOPS AND THERE ARE STILL CORRECTIONS LEFT TO DO.

THE ICIFIX DATA TEXT STEP IS AS DESCRIBED FOR THE INITIAL
PROCESSING SEQUENCE, EXCEPT THAT THE INPUT IS THE MOST RECENT
VERSION OF THE DATA TEXT.

IF ICIFRONT IS TO BE USED AGAIN AND ERRORS HAVE BEEN FOUND
PREVIOUSLY THEN THE ICIFIX REPAIR TEXT CORRECTION TEXT
STEP WILL HAVE TO BE DONE. DO NOT ENABLE TYPIST ENTRY CHECKING
FOR THIS STEP. THIS MUST BE DONE BY HAND FOR CORRECTION TEXT.

USE THE LSPFRONT PROCEDURE TO RUN ICIFRONT. THE STANDARD
UNITS ARE... 181 FOR DATA TEXT, 182 FOR CORRECTION TEXT, AND
180 FOR CLEANED FORMAT OUTPUT. THE RESULTS MAY LOOK FAIRLY BAD
AT FIRST, BUT INITIALLY ICIFRONT'S OUTPUT IMPROVES DRAMATICALLY
WITH JUST A SMALL AMOUNT OF FIXING IN BOTH THE DATA AND CORRECTION
TEXTS.

IF ICIFRONT WAS NOT USED THEN THE ICISCAN STEP SHOULD BE
RUN WITH THE LSPISCAN PROCEDURE AS IN THE INITIAL PROCESSING STAGE.
THE ICIFRONT CASE IS DESCRIBED IN THE FOLLOWING PARAGRAPHS...

LSPCLIN IS USED TO RUN THE CLEANED FORMAT OUTPUT THROUGH
THE ICISCAN PROGRAM. THE INPUT FILE IS NAMED CLIN. THE DEFAULT
INPUT UNIT IS 180 AS THE LSPISCAN PROCEDURE. THE STANDARD
OUTPUT UNIT AND VOLUME ARE ALSO IDENTICAL TO THOSE OF THE LSPISCAN
RUN. TO AVOID OVERWRITING PREVIOUS OUTPUT YOU MAY USE A HIGHER
OUTSEQ NUMBER (AS LONG AS THERE IS ROOM ON THE TAPE).

ICIFRONT SEEMS TO INCREASE THE ERROR RATE WHEN USED ON RAW
DATA AND CORRECTION TEXT. HOWEVER WHEN THE DATA TEXT HAS HAD ALL OF
ITS BAD TYPIST ENTRIES FIXED AND CERTAIN HORRIBLE CORRECTION TEXT
MEMBER NAME DOCOLSPS

ERRORS HAVE BEEN FIXED THEN USE OF ICIFRONT IS LIKELY TO BE
BENEFICIAL. THE REAL STICKLER IS THAT IT MAY CREATE A NEW
BAD DCHG ERROR. ANOTHER PROBLEM IS THAT AN ERROR MAY BE
CORRECTED BY BOTH ICIFRONT AND ICIFIX. THE SOLUTION HERE IS TO
DELETE THE CORRECTION FROM THE CORRECTION TEXT AND CORRECT THE DATA
TEXT WITH ICIFIX.

ALTHOUGH NOT ESSENTIAL, IT IS PROBABLY BETTER TO PUT THE
SYSPRINT OUTPUT ON TAPE AND USE LSPRINT RATHER THAN PRINT
DIRECTLY, SINCE BRACKETS ARE SO RELEVANT AT THIS STAGE.

AFTER RUNNING ICISCAN A DECISION MUST BE MADE AS TO WHETHER
to go on with the present cycle or to go back and use ICIFIX
to correct major errors and then rerun ICISCAN AGAIN.
THIS DECISION SHOULD BE BASED PRIMARILY ON THE SAME DETAILS AS
ARE DESCRIBED IN THE ANALYSIS STEP. USUALLY IT IS BEST TO GO
AHEAD AND RUN STRCT REGARDLESS OF ERRORS.

IN RUNNING STRCT IT IS PROBABLY BETTER TO JUST PRINT
DIRECTLY ON THE PRINTER RATHER THAN USE UNIT 181 UNLESS IT
IS ONE OF THE FINAL CYCLES OF THE DATA ENTRY STAGE. THERE IS
NO TAPE PROCEDURE FOR THIS STEP, A STRAIGHT PROGRAM IS USED
SINCE IT IS ANTICIPATED THAT NO FLEXIBILITY WILL BE NEEDED IN
TAPE ALLOCATION ETC.

IN RUNNING STRCT THE SAME CONSIDERATIONS FOR OVERWRITING
PREVIOUS OUTPUT APPLY AS WITH THE ICISCAN PROGRAM. SINCE STRCT
IS RUN BY STRAIGHT JCL THE ACTUAL DD CARD IN THE RUN DECK
WILL HAVE TO BE REPLACED OR SUPERSEDED BY ONE WITH THE SAME
NAME IN THE DECK.

CONDITIONS FOR CONTINUING WITH LADDR RATHER THAN RESTARTING
AT THE ANALYSIS STEP ARE ALWAYS THE SAME - NO BAD DCHG ERRORS,
AND NO SEASON CHANGES MISSED.

*** RETRIEVAL STEPS ***

IF SORT RECORDS ARE TO BE PRODUCED THEN AFTER
A SUCCESSFUL LADDR RUN YOU SHOULD ALMOST CERTAINLY
RUN ITEMS RATHER THAN RESTART THE CYCLE. ONLY RESTART IF THERE
IS AN EASY WAY TO GET RID OF A SUBSTANTIAL PORTION OF ERRORS.
TO SELECT ALL RECORDS IN A BATCH USE THE FOLLOWING STATEMENTS
AFTER THE OPTION CARD ..

1) DATE RANGE, '5 1659 07 01 1800 12 31'
2) SE CARD TO CAUSE SELECTION OF ALL RECORDS, '1T'
3) GO CARD, '7'
4) STOP CARD, '9'

ITEMS SHOULD TAKE APPROXIMATELY 40 MINUTES PER OUTPUT REEL, PLUS
SEVERAL MINUTES CHANGEOVER. BATCH 1 TOOK APPROXIMATELY 2 REELS.
BEFORE RUNNING CHECK AND SEE IF ANY BATCH (ESP NO. 3) HAS A
MUCH BIGGER OUTPUT CHAR COUNT IN THE LADDR PROGRAM, AND IF SO
THEN ADD MORE NAMES TO THE OUTPUT VOLUME LIST ON THE ITSM DD
STATEMENT. THE STEPCODE IS 'GO'.

THE SORT STEP, IF ANY, NEED NOT USE ANYTHING PECULIAR TO
THE LONDON STAGE PROJECT SINCE THE PROGRAM INVOLVED IS SUPPLIED
BY IBM, HOWEVER THERE ARE 2 PROCEDURES PROVIDED, LSPSORT AND
LSPMERGE. LSPSORT IS USED FOR SORTS HAVING TAPE INPUT AND
OUTPUT, USING DISKS AS INTERMEDIATE STORAGE AREAS. WITH SUFFICIENT
SPACE ON THE DISKS IT CAN SORT APPRX.50,000 RECORDS PER RUN.
THIS IS MORE THAN 1 TAPEFULL (UNBLOCKED) BUT LESS THAN 2 TAPES
FULL. BATCH NUMBER 1 (WITH ONLY SLIGHT CORRECTIONS IN IT)
HAS APPROXIMATELY 64,000 SORT RECORDS. A FAIRLY GOOD WAY
MEMBER NAME DOCOLSPS
TO GET AROUND THIS IS TO 1) DO N SEPARATE SORTS, EACH PRODUCING
ONE TAPE OF OUTPUT FROM ONE TAPE OF INPUT, AND 2) THEN DO
SUCCESSIVE 2 WAY MERGES OF THESE UNTIL ONLY ONE FILE (OF 1 OR
MORE TAPES) IS LEFT. THIS MERGING PROCESS IS FACILITATED BY
THE LSPMERGE PROCEDURE.

THE OUTPUT OF THE SORT STEP CAN BE
USED AS INPUT TO ANOTHER SORT STEP, BUT IF OUTPUT IS BLOCKED THEN
ONE SORT STEP MAY NOT BE ABLE TO HANDLE AN ENTIRE TAPE AT ONE
SHOT. ONE SOLUTION IS TO USE THE LSPDBLOK PROCEDURE TO UNBLOCK
THE DATA ONTO SEVERAL TAPES. AN UNBLOCKED TAPE CAN HOLD APPRX.
32,000 RECORDS. A TAPE BLOCKED BY A FACTOR OF 19 CAN HOLD APPRX.
96,000 RECORDS.

THE FRMAT PROGRAM PRINTS, IN A HOPEFULLY NEAT MANNER, OUTPUT
FROM THE ITEMS OR SORT STEPS. THE TAPE PROCEDURE FOR THIS IS
LSPFRMAT. THE NORMALLY REQUIRED PARAMETERS ARE INUNIT=, & INVOL=.
INVOL= MAY ACTUALLY BE A LIST OF SEVERAL VOLUMES ENCLOSED IN
QUOTES, FOR EXAMPLE ..
//F EXEC LSPFRMAT,INUNIT=180,INVOL=’LSP018,LSP034’
DEFAULTS ARE INUNIT=182,INVOL=LSP018.
THE GROOVE

FOR STANDARDIZATION AND SIMPLICITY OF OPERATION, IT IS RECOMMENDED
THAT THE FOLLOWING UNITS, VOLUMES, AND DSN'S BE USED..

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OPTION BITS FOR ICIFRONT .. (IOPT)
1) CLEAN INPUT FROM FILE DATX INSTEAD OF SCANNER FORMAT INPUT.
2) ENABLE LOG MESSAGES.
3) ENABLE 'ORG FOR C/D' LOG MESSAGES.
   EVERY COLUMN OF THE OPTION CARD SHOULD HAVE A '0' IN IT UNLESS IT IS INDICATING A '1' OPTION.

OPTION BITS FOR ICISCAN ..
1) SIMULATE END OF DATA INPUT IMMEDIATELY (STOP).
2) PRINT ALL STRUCTURED OUTPUT SECTIONS ALONG WITH THEIR LINE NUMBERS.
3) LIST INPUT LINES AND CROSS REFERENCE INFO ON SYSPRINT.
4) SUPPRESS 'BAD TYPIST ENTRY' MESSAGE FOR ENTRIES ENDING WITH '$@'
    OF THE USUAL VARIETY.
5) LIST SECTIONS THAT ARE PROBABLY IN ERROR DUE TO THEIR ASSOCIATION
    WITH AN ILLEGAL DELIM OR THEIR NOT HAVING A SMALL LETTER AFTER THE '*'.
6) NOTE TYPIST PAGE ENTRIES AS THEY ARE ENCOUNTERED IN LINE READIN.
7) CLEANED INPUT FROM FILE CLIN.
8) PRINT PIECE OF TEXT PRECEDING ILLEGAL DELIM, FROM DELIM BEFORE ILLEGAL
    ONE TO THE ILLEGAL ONE INCLUSIVE, IMMEDIATELY FOLLOWING THE ILLEGAL
    DELIM MESSAGE ITSELF.
9) PRINT A LINE OF CERTAIN DEBUGGING INFO ON ENCOUNTERING A DELIM.
10) PERFORM ILLEGAL CHAR CHECK.
11) ENABLE ILLEGAL DELIM ERROR MESSAGE.
12) PRINT INDEX ENTRIES LEGITIMATELY PROCESSED. CERTAIN INCORRECTLY
    DELIMITED ONES OR OUT OF CONTEXT ONES ARE NOT CAUGHT.
13) CLEANED OUTPUT TO FILE CLOUT.
15) SKIP INPUT LINES, BUT STILL COUNT THEM AS USUAL - IN PARTICULAR
    BLANK LINES ARE STILL NOT COUNTED.
16) REVERT TO REGULAR TEXT MODE IF IN CORRECTION TEXT MODE ONLY
    UPON ENCOUNTERING A PAGE ENTRY ON A LINE THAT HAS NO SLASHES
    (DESIRABLE FOR FIRST RUN WHEN CORRECTION TEXT IS LIKELY TO BE PRESENT).

OPTION BITS FOR SAVEDT .. (IOPT)
1) PRINT TRANSLATED INPUT BLKS CLEANED OF EXTRA FEED CHARS.
MEMBER NAME: DOCOPERL

2) PRINT ERR MSG CONCERNING MTST ENTRY STARTING TOO FAR AFTER BEGINNING OF BLK.
4) PRINT ERR MSG CONCERNING LACK OF '1/2' CHAR WITHIN 70 BYTES OF EOB.
5) PRINT ERR MSG CONCERNING ILLEGAL (0.9.6) CHARS IN TEXT.
6) PRINT MSG CONCERNING START OF EACH NEW SECTION.
7) PRINT MAP OF EACH INPUT BLK.
8) PRINT EACH PURIFIED TEXT BLK WRITTEN TO 'PURE' FILE.
11) PRINT EXPANDED ERR MSG CONCERNING NO MATCHING RIGHT Bracket.
12) PRINT LOG-TYPE ERR MESSAGES .. (FUNP,BNDX,ICSB,NORX,IJOB,NORB,MTOO).
14) ENABLE 'FUNP' ERROR MESSAGES.
15) PRINT ERR MSG CONCERNING NONCONSECUTIVE MTST TAPES.
17) LIST INDEX ENTRIES PRODUCED.

OPTION BITS FOR STRUCTUR .. (IOPT)
1) PRINT EACH RAW INPUT SECTION.
2) PRINT ONE LINE SECTION HEADER MESSAGE.
3) PRINT MAP OF INPUT BLK WITH COORDINATES, ETC FOR LOCATING ERRORS.
4) PRINT EACH SECTION OF RAW OUTPUT.
5) SCANNER TYPE INPUT, WITH '*' INSTEAD OF PREFIX FOR SECTION DLM.
6) PRINT MSG AFTER SUCCESSFULLY PROCESSING LONDON STAGE PAGE ENTRY.
7) CREATE UNKEYED SEQL OUTPUT, KEY DATA APPENDED TO FRONT OF BLKS.
8) PUT OUT DIRECT ACCESS KEYED BLKS.
9) ACCEPT MONTHS IN LADDER REFERENCES IN ANY COMBINATION OF UPPER OR LOWER CASE (USED IN CONJUNCTION WITH ALL UPPER CASE MONSTR CARDS).
21) LIST EACH ITEM RETURNED BY GITM.
25) SKIP INPUT BLK OPTION.
27) SET INDICATOR TO CAUSE PRINTING OF MAP AND RAW OUTPUT FOR SECTIONS ASSOCIATED WITH ERRORS.

OPTION BITS FOR LADDER ..
1) PRINT MAP WITH COORDINATES OF EACH INPUT BLK.
2) CLEAR LADA FILE AT START OF EACH NEW SEASON. USED IN ORDER TO PROCESS UNLIMITED SIZE FILES ON TAPE.
3) SKIP INPUT BLKS OPTION (ALSO IGNORES SEASON CHANGES). FOR DEBUGGING OR SKIPPING AROUND SECTIONS THAT CAUSE PROGRAM TO BOMB ETC.
4) PRINT EACH BLK OF RAW INPUT READ DURING LADDER SEARCH.
5) ONE LINE HEADER FOR EACH INPUT BLK, GIVING LENGTH, SECTYPE, THEATRE, BLK NUMBER, DATE, AND 1ST PART OF BLK ITSELF.
6) SEQUENTIAL FORMAT INPUT FROM FILE STRS.
7) SEQUENTIAL FORMAT OUTPUT TO FILE LADS.
17) PRINT OLD AND NEW TITLES AFTER LADDER REFERENCE READ-IN.
24) PRINT EACH BLK OF RAW OUTPUT.
27) SET INDICATOR FOR PRINTING OF EXTRA INFO FOR SECTIONS WITH ERROR MESSAGES.

LADDR HAS A DEBUG CHAIN IN COLS 33-36.

OPTION BITS FOR ITEMGET .. (IOPT)
1) PRINT MAP OF EACH INPUT SECTION IN LINES OF 100 CHAR EACH WITH COORDINATES FOR EASY LOCATION OF CHARACTERS IN ERROR.
2) PRINT EACH ITEM AS IT IS ENCOUNTERED IN INPUT/SETUP. (DEBUG).
3) PRINT EACH GRP AS IT IS ENCOUNTERED IN INPUT SETUP. (DEBUG).
4) SECTION TITLES IN CAPS.
5) PRINT HEADER FOR EACH INPUT SECTION, INCLUDES INPUT SECTION NUMBER, KEY UNTIL IT'S TAKEN OUT, LENGTH OF SECTION, AND FIRST FEW CHAR OF SECTION ITSELF.
7) ALLOW FOR PERFORMANCE SELECTION VIA LEVEL 4 INCLUSIVENESS.
MEMBER NAME DOCOPERL
8) UNKEYED SEQUENTIAL INPUT FROM LADS FILE INTENDED FOR TAPE INPUT.
9) UNKEYED SEQUENTIAL OUTPUT TO ITSM FILE (INTENDED FOR TAPE OUTPUT).
10) PRINT CONTROL FLOW TRACE FOR SELECTED TRANSFERS.
11) PRINT THE SELECTION CONTROL BLK BEFORE EACH EXIT FROM THE CONTROL
CARD INTERPRETER IN NEAT FORMAT WITH HEADINGS.
12) CLEAR STATS ARRAY AFTER EACH PRINTING OF IT.
19) PRINT EACH OUTPUT RECORD IN FORMAT WHICH USUALLY FITS ON 1 LINE.
29-32) ALLOW ERROR MESSAGE FOR ILLEGAL CHARACTER TO BE PRINTED
THEATRE, TITLE, ROLE, AND ACTOR RESPECTIVELY.

OPTION BITS FOR FORMAT (IOPT) ..
1) LIST IN DATA DIRECTED FORMAT ALL VARIABLES IN PROGRAM
AFTER EACH RECORD IS PRINTED (DEBUG).

OPTION BITS FOR LSPRINT .. (IOPT)
64) GET DATA TO BE LISTED FROM FILE SYSIN RATHER THAN FILE IN.
65) NO PRINTER CARRIAGE CONTROL CHARACTER.
66) TYPE NUMBER OF LINES COUNTED ON 1052 AFTER EACH ENDFILE OR
END OF RANGE.
69) PUT LINE NUMBERS IN F(7) FORMAT STARTING IN COL(83) OF OUTPUT.
71) DO NOT COUNT ENTIRELY BLANK LINES (CARRIAGE CTRL CHAR IS
CONSIDERED HERE).
72) CREATE BACKUP FILE OF INPUT.
73) NO TRANSLATION FOR FIRST PRINTING OF LINE.
74) NO OVERPRINT ON TOP OF FIRST LINE.
75) ENABLE STANDARD PL/1 SYSTEM ACTION FOR ENDPAGE(SYSPRINT)
ON-CONDITION, I.E. DON'T IGNORE ENDPAGES.
    LSPRINT'S OPTION CARD FOLLOWS THE TRANSLATION TABLES. THERE
    IS NO OPTION CHAIN, AND LSPRINT CHECKS FOR NO ERRORS.

PLIST OPTIONS
PLIST HAS ONLY 1 OPTION .. LIST LENGTH OF INPUT RECORDS.
THIS LENGTH LISTING IS SPECIFIED BY PUTTING ONE OR MORE CHARACTERS
IN THE PARM FIELD OF THE EXEC STATEMENT. THERE SHOULD BE NO PARM
FIELD IF A PLAIN LISTING IS DESIRED.

ICIFront ..
1) NO "*" AT LOGICAL BEGINNING OF CORRECTION STATEMENT.
   WHEN LOOKING FOR THE "*" THAT DEFINES THE START OF
   EACH CORRECTION STATEMENT, THE PROGRAM FOUND ANOTHER
   NONBLANK CHARACTER FIRST. THIS IS A FLUSHING ERROR.

2) ILLEGAL END OF PAGE ENTRY IN LINE N
   WHERE N IS THE CURRENT ABSOLUTE LINE NUMBER OF THE
   DATA TEXT. THIS IS A FAIRLY UNLIKELY ERROR INDICATING
   THAT SOMETHING IS HORRIBLY WRONG EITHER WITH THE
   CORRECTION TEXT OR WITH THE PROGRAM. THE PROGRAM
   STOPS AFTER THIS MESSAGE.

3) NO FCN
   AFTER THE BEGINNING OF A STATEMENT NO FUNCTION
   OR COMMAND CHARACTER CANDIDATES COULD BE FOUND AT ALL.
   A FATAL ERROR.

4) BAD PAGE SEQUENCE M,N IN LINE X.
   PAGE N FOLLOWS PAGE M IN THE DATA TEXT. PAGE N
   STARTS ON ABSOLUTE LINE X.