CHD

Title:

UTILITY PROGRAM

TELEDBEX

A/S REGNECENTRALEN

RC SYSTEM LIBRARY: FALKONERALLE 1 DK-2000 COPENHAGEN F

RCSL No: 21-T020
Edition: July 1978
Author: Niels Hasholt

Keywords: Teledata, RC8000, utility programs, extraction.

Abstract:

The Teledata utility program Teledbex is used for extraction of information from the online database. The information is used for generation of daily- or requested reports. This manual will later on appear as a part of the Teledata Utiltiy Programs (RCSL No. 21-T008).

English edition, pages: 20.

Copyright A/S Regnecentralen, 1978
Printed by A/S Regnecentralen, Copenhagen

Users of this manual are cautioned that the specifications contained herein are subject to change by RC at any time without prior notice. RC is not responsible for typographical or arithmetic errors which may appear in this manual and shall not be responsible for any damages caused by reliance on any of the materials presented.

5. Teledbex

Extraction from database

The program performs extractions from the online-database. The database is scanned in several pre-defined ways (extractmodes) and relevant records are generated on several user-specific output files.

Control

Teledbex is a CONTROL program for the DUET - SODA system (like TELEOP, TELELOGEX and DUETFRAME, including facilities relevant for the database extraction. This means that the processing is controlled by a DUET-program and all the input/output operations on record level are performed by the SODA-system.

DUET

SODA

5.2 Call

The program call and FP parameters are:

```
                 multiset.<no>
                 index.<no>.<name>
                 stdout.<name>
                 read.<name>
                 stdassign.<no>
                                  <no>
teledbex         print.<no>{.<name>     }
                                  <no>
                 descrip.<name>
                 ldsection.<no>
                 duetfile.<name>
                 user.<no>
                 duetarea.<no>
```

where: <name> is a name of a discfile
<no> is a number

All parameters have default values.

5. Teledbex

5.3 Explanation of the parameters

`multiset.<no>`

Indicates the set number used for the multi output mecanism (see section 5.4).
Default: multiset.1.

`index.<no>.<name>`

Defines an index (<no>) and the corresponding name of a disc file (<name>), for use in multioutput. After a selection (in the duet-program) of this index, all output on multiset will be directed to the corresponding file. The parameter should be stated for all indices relevant in the program call. The files must exist.
<no> must not exceed 200.
Default: No indices defined,
all file names set to "dummy".

`stdout.<name>`

States the name of the file, on which the DUET/SODA system normally writes error messages. The file must exist.
Default: stdout.duetlog

5. Teledbex

5.3 Explanation of the parameters

```
read.<name>
```

States the name of the file, used for reading character input by means of duet operations read and getline. If used, the file must exist.

```
stdassign.<no>
```

Controls the assignment of norm value to a variable when a standard mark is read (duet operation read).
<no> = 0 means that the variable is not altered.
<no> <>0 means that the norm value is assigned to the variable.
Default: std.assign.1

```
                          <no>
print.<no>  .<name>
                          <no>
```

Defines the number of print channels (for the duet operation print), and the corresponding names of disc files. <no> is the number of print channels. They will be numbered 1, 2, ... <no>.
<no> must not exceed 5.

Exactly <no> number of different file names must be stated. The files must exist (if used).
Default: print.1.printout

5. Teledbex

5.3 Explanation of the parameters

descrip.<name>

States the name of the desciption file, containing the compiled SODA LD description.
Default descrip.descripfile

ldsection.<no>

States the section no of the compiled SODA LD description, as identification of the LD description in question (among others in the description file).
Default: ldsection.0.

duetfile.<name>

States the name of the file containing the compiled DUET program.
Default: duetfile.duetfile

user.<no>

States the user number of this program call.
Used by the DUET interpreter for dynamic checking of legal block references. User.0 means all users.
Default: user.0.

5. Teledbex

5.3 Explanation of the parameters

duetarea.<no>

States the size (in number of words) of the core buffer used by the DUET interpreter for dynamic storage of compiled duet program blocks.
Default: duetarea.3000.

5. Teledbex

5.4 Function

control program

Teledbex is a control program for the DUET - SODA-system. In fact it is the standard DUETFRAME extended with 2 facilities: Handling of multioutput files and generation of unique transaction-numbers (see below). All the processing is controlled by a DUET-program (and the corresponding SODA LD description). In order to show how a database-extraction might take place, a model solution will be supplied consisting of a db- and ld-description and a duet-program. The duetprogram has been implemented according to the principles used in the Teledata-online system, namely to divide the program into a socalled skeleton-part and an adaption part. A survey is given in section 5.4.2.

model

Skeleton-part
adaption-part

i/o files

All files accessed must exist with the name, type (fx blocklength) as described in the DB description (and SODA LD). There is one exception to this: multi output files. The purpose of this facility is to generate output on user specific files by using the user number as index among the multi output files.

multi output

multiset

One of the sets defined in SODA LD is selected as multiset (FP parameter). To this set a file is connected which is described in the DB description and referred to in the SODA LD. This file gets index 0. By means of algol operation 1 this file can be exchanged with another file, indicated by another index. This may be repeated any number of times (the file names - except index 0 - are stated as FP parameter).

index 0
algol 1

5. Teledbex

5.4 Function

program start
select file index
program end

At program start, file index 0 is selected. When reading inputlines each containing a usernumber, the file index <userno>is selected, and all records created will end up in the selected file. The selection only takes place when a new usernumber appears in the inputfile. At program end, Teledbex will terminate the use of all files connected to multiset. All files on multiset must have 1 segm. as blocklength.

1 segm/block

inputfile

The name of the inputfile is delivered as a fp-parameter.
The inputfile contains demands on reports for one or several users.
The inputfile could be generated as a result of some inputtransactions in the Teledata online system, but this facility is not introduced in the present model solution.

algol 2

As the inputfile contains inputlines each demanding a printout of a report, and as one report could be demanded more than once during a period of more days, then the need for a unique identification of all generated records origination from one inputline arises. To this purpose the algol-speciel action 2 was developed: Each generated transaction will be identified in the following way: ddccccccttt (see section 5.4.1), where the last eight digits from the left are assigned each time teledbex is called; ttt is increased by one for each transaction read from the inputfile, starting with one.

5. Teledbex

5.4.1 Description of algol operations

1. Select multiindex file

call

```
algol 1 (index, result)
```

parameters

index	(word, long or constant). Call parameter. Points out the file to be selected.
result	(word). Return parameter. 0 = OK. 1 = index not defined in FP parameters (but the index is selected anyway: file name is 'dummy'). 2 = index outside range (0 - 200) (no selection is performed)

function

Terminates use of current (last) file, and stores the description of this. Makes the new file available for normal processing by SODA, setting up the relevant description.

2. Generate transactionnumber

call

```
algol 2 (transno)
```

parameters

transno (long) return parameter

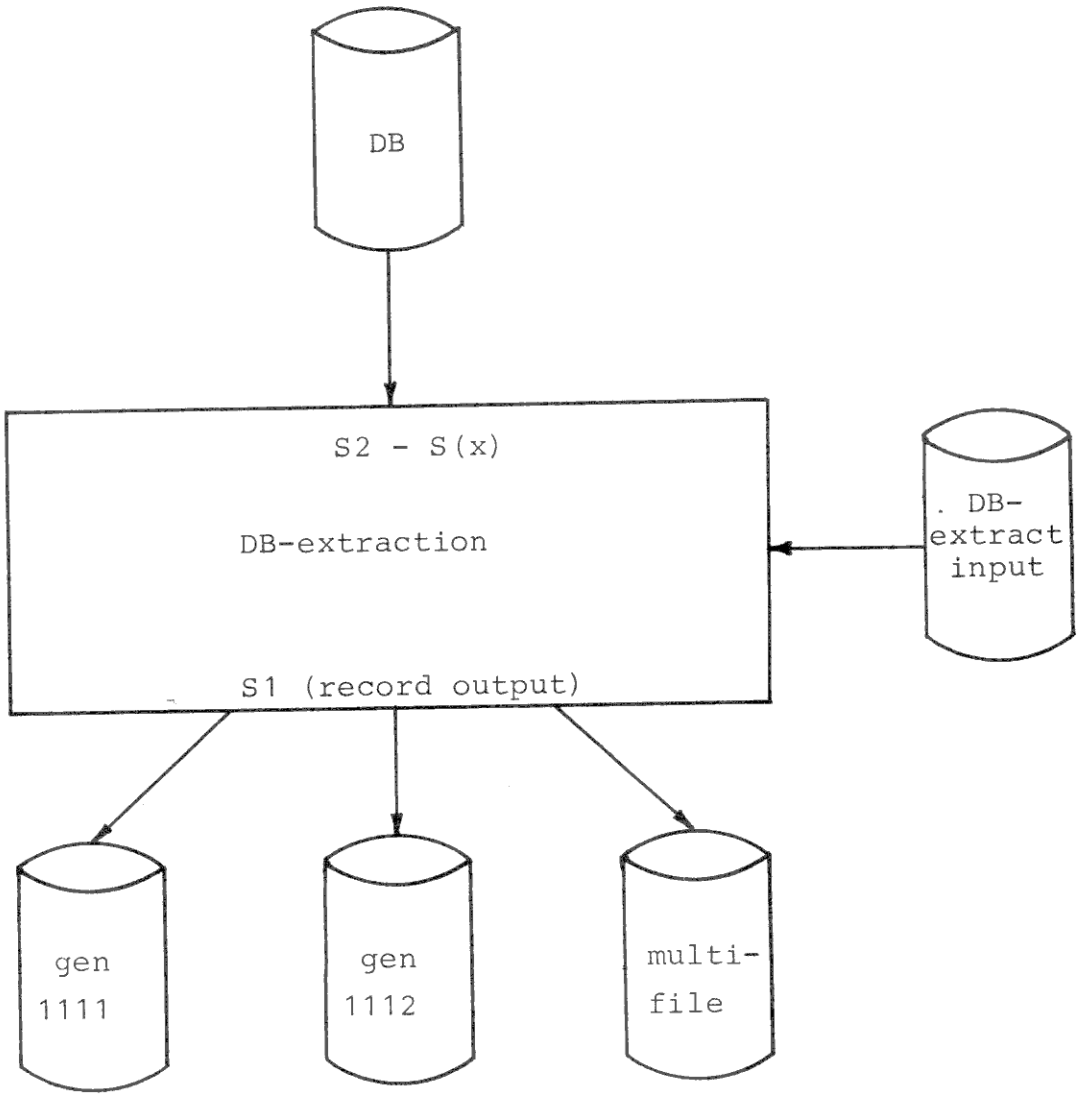
ddcccccc000
dd: day
cccccc: hour. min. sec.

function

Generates a unique identification of transactions generated within a month.

5. Teledbex

5.4.2 Survey of DB-extraction model



The figur shows the universe of the db-extraction run.

5. Teledbex

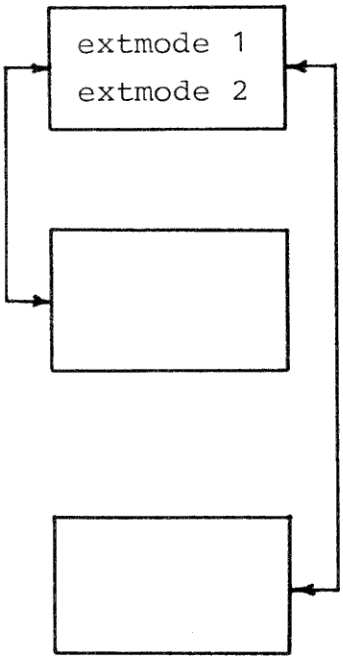
5.4.2 DB-extraction model

Introduction

skeleton program

The DUET-program attached to the Teledbex-control program consists of three duet-blocks. Block one contains the skeleton-part and the two other blocks contain the adaption attached to each extractmode defined in the skeleton program one for each extract mode. Therefore the number of blocks should be increased for each new extractmode you want to introduce in the skeleton program.

program structure



5. Teledbex

5.4.2 DB-extraction model

extractmodes

The present version of the skeleton program contains two extractmodes working on two different file structures. The duet program concerning extractmode one takes care of processing of a single masterfile which means a sequential scan of a certain masterfile with user-governed selection of records.

The second extractmode takes care of processing of a more complicated file structure namely: master-list-master, but following the same principles as extractmode one, which means user-governed selection-criterias on all levels.

outputtypes

modifications

At present only two outputtypes are produced, one for each extractmode, but by changing the localdata- and database description it should be rather easy to add new outputtypes. If needed, you should not hesitate to add new extractmodes in the skeleton program.

outputtype	outputname	extractmode
8	credit excess list	1
9	sales order survey	2

multifile

Described as part of the post DB description. Declared as set 1 in SODA LD (reference to 'postdescr' of the post processing). The file is not used, as all output on this set is directed to gen1111 and gen1112

5. Teledbex

5.4.2 DB-extraction model

gen1111
gen1112

These files are declared in the call of Teledbex (index.11.gen1111 index.12.gen1112). The selection of the files is done in the duet program (algol 1), when input records from user 11 and 12, respectively, are met (only these users are included in the current data base of the Model Solution).

inputfile

The inputfile is a textfile containing one or several inputlines each one terminated by a new-line character.

The inputfile can contain inputlines for several users.

The inputline can be divided into two sections. One is interpreted by the skeleton program and the other by the adaption.

The skeleton-part of the inputline must contain:

1. usernumber
2. extractmode

The adaption-part could contain

1. output type
2. some optional values which can govern the extraction

The inputfile should be terminated by an em-character.

5. Teledbex

5.4.2 DB-extraction model

syntax for one inputline

idx <userno> exm <extmode> ot <outputtype>

{ outputtype - / user - / installation - } specific information

Examples:

```
idx  11  exm 1  ot  8
idx  11  exm 2  ot  9  pl  3  dl  780601
idx  12  exm 2  ot  9
idx  11  exm 2  ot  9  pl  1
```

Errormessages:

illegal informationcode <infcode>

the informationcode unknown to either the skeleton program or the adaption

illegal extractmode <extmode>

the skeleton program do not contain an extractmode with the keyed number

reportnumber missing

reportnumber should be stated in the inputline

illegal reportnumber

The report with the keyed number is undefined

5. Teledbex

5.4.2 DB-extraction model

The above mentioned errormessages will all be followed by a listing of the inputtransaction which caused the errormessage.

eks.

```
illegal extractmode  9

transaction read from inputfile: idx 11  exm 9 ot 5
```

Besides the above mentioned errormessages, off course the usual duet-data- and duet-program errors can occur.

The errormessages will be directed to the textarea attacted to printchannel 1.

5. Teledbex

5.5 Requirements

Depends off course very much on the extractmode and the volume of SODA LD and Duet-program. The following estimates are for the db-extraction model.

size:	min 70 000
area:	12
buf:	10
time:	50 sec.

5. Teledbex

5.6 Messages from program

Every program call generates the standard log of the DUET system. Teledbex writes (example from the model):

```
Teledbex: start of multi output:
  index  file       segm   records     eof(block.byte)
      0  multifile     1         0          0.0
     11  gen1111       1         0          0.0
     12  gen1112       1         0          0.0

Teledbex: end of multi output:
  index  file       segm   records     eof(block.byte)
      0  multifile     1         0          0.0
     11  gen1111       1         8          0.276
     12  gen1112      21        17          1.350
```

5. Teledbex

5.8 Example

In the example the following files should be present.

batchdescr contains compiled DB and LD descr.

dbxduetfile contains compiled Duet program

```
inputfile=copy 4

idx 11 exm 1  ot 8
idx 12 exm 1  ot 8
idx 11 exm 2  ot 9  dl 781231  pl 3
ldx 12 exm 1  ot 5

multifile = set 1 disc 0 0 0 20.1
gen1111   = set 1 disc 0 0 0 20.1
gen1112   = set 1 disc 0 0 0 20.1

logprint  = copy 0
duetlog   = copy 0

teledbex    index.11.gen1111,
            index.12.gen1112,
            descrip.batchdescr,
            ldsection.112.1,
            duetfile.dbxduetfile,
            read.inputfile
            print.1.logprint

c = copy logprint
c = copy duetlog
```

5. Teledbex

5.9 Error messages

Duet program error 28, 29 or 30

Will be activated from the algol operations, if some errors in the parameters are detected (wrong type ect).

xxxfile: <name> does not exist

xxxfile: <name> not 1 segm per block

These errors will only occur on multi output files defined in FP parameters.

xxx.create area-/reserve process trobles for: <name> <res> xxx.userindex read from inputfile: <userno>

Resource troubles in algol 1 (select multi index file), when the file mentioned should be selected. <res> is a two digit number (XY), where X is result of 'create area process', and Y is result of 'reserve process'. Too few area's (in job line) will give X<>0. If some other process (job) is using the file, Y<>0 will occur.

READER'S COMMENTS

A/S Regnecentralen maintains a continous effort to improve the quality and usefulness of its publications. To do this effectively we need user feedback - your critical evaluation of this manual.

Please comment on this manual's completeness, accuracy, organization, usability, and readability:

_____

_____

_____

Do you find errors in this manual ? If so, specify by page.

_____

_____

How can this manual be improved ?

_____

_____

Other comments ?

_____

_____

_____

==========

Please state your position: _____

Name: _____ Organization: _____

Address: _____ Department: _____

_____ _____

_____ _____

Date: _____

Thank you !

RETURN LETTER - CONTENTS AND LAYOUT

---------- Fold here ----------

==========

Affix
postage
here

A/S REGNECENTRALEN
Marketing Department
Falkoner Allé 1
2000 Copenhagen F
Denmark