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## Getting More Out Of DataFax Reports

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### Standard DataFax Reports

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- DF\_AT\* -audit trails
- DF\_CT\* -center tracking
- DF\_IC\* -integrity checks
- DF\_PT\* -patient tracking
- DF\_QC\* -quality control
- DF\_SS\* -study setup
- DF\_WF\* -work flow
- DF\_stats -descriptive statistics

## DF\_ATfaxes

List all faxes received from clinical sites

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### Questions

- center 14 (905 522 8868) claims they sent us a fax in mid Dec which we never received. How can we review faxes received around this time, and specifically from center 14?
- what CRF pages did the fax contain?
- what has become of each of those pages, i.e. show validation history?

## DF\_ATfaxes

List all faxes received on Dec 15,1995

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-t 1995/12/15

```

fax 9550/0088 pages 16 1995/12/15 10:21:40 sender: 519 6633196
fax 9550/0089 pages 8 1995/12/15 10:43:25 sender: 6082637652
fax 9550/0090 pages 16 1995/12/15 10:32:27 sender: 416 574 2837
fax 9550/0091 pages 34 1995/12/15 10:44:11 sender: 9055214967
fax 9550/0092 pages 6 1995/12/15 10:48:15 sender: 9055214967
fax 9550/0093 pages 16 1995/12/15 10:32:27 sender: 416 574 2837
fax 9550/0094 pages 7 1995/12/15 10:58:02 sender: 9055214967
fax 9550/0095 pages 16 1995/12/15 10:32:27 sender: 416 574 2837
fax 9550/0096 pages 1 1995/12/15 11:30:08 sender: 2442 913077758088
fax 9550/0097 pages 30 1995/12/15 11:32:19 sender: 905 5214958
fax 9550/0098 pages 1 1995/12/15 11:35:24 sender: 2442 913077758088
fax 9550/0099 pages 3 1995/12/15 11:35:58 sender: 416 369 5298

```

...

## DF\_ATfaxes

List faxes from center 14 in the month of Dec 1995

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-t 1995/12/01~1995/12/31 -s "905 522 8868"

fax 9549/0056	pages 5	1995/12/05 12:19:06	sender: 905 522 8868
fax 9549/0059	pages 5	1995/12/05 12:27:13	sender: 905 522 8868
fax 9549/0069	pages 8	1995/12/05 16:16:04	sender: 905 522 8868
fax 9550/0027	pages 2	1995/12/12 12:07:41	sender: 905 522 8868
fax 9550/0035	pages 8	1995/12/12 15:39:31	sender: 905 522 8868
fax 9550/0037	pages 8	1995/12/12 15:52:01	sender: 905 522 8868
fax 9550/0039	pages 5	1995/12/12 16:03:22	sender: 905 522 8868
fax 9550/0044	pages 2	1995/12/12 16:54:51	sender: 905 522 8868
fax 9550/0112	pages 3	1995/12/15 14:52:57	sender: 905 522 8868
fax 9551/0013	pages 4	1995/12/18 14:23:47	sender: 905 522 8868
fax 9551/0016	pages 9	1995/12/18 15:05:35	sender: 905 522 8868
fax 9551/0032	pages 4	1995/12/19 13:14:09	sender: 905 522 8868

## DF\_ATfaxes

Show validation history of pages in fax 9550/0112

---

-f 9550/0112 -j 0123

fax 9550/0112	page 1/3	1995/12/15 14:52:57	sender: 905 522 8868
14526	4 13 0	1995/12/15 14:54:05	
14526	4 13 d1	1995/12/18 09:12:20	naomi
14526	4 13 d2	1995/12/19 09:22:28	naomi
14526	4 13 d3	1995/12/20 09:14:30	femy
14526	4 13 d5	1995/12/20 10:33:42	jeanine
14526	4 13 D5	1996/01/03 11:20:31	naomi
fax 9550/0112	page 2/3	1995/12/15 14:52:57	sender: 905 522 8868
14526	4 8 0	1995/12/15 14:54:06	
14526	4 8 d1	1995/12/18 09:12:10	naomi
14526	4 8 c2	1995/12/19 09:22:10	naomi
14526	4 8 c3	1995/12/21 08:06:55	femy
14526	4 8 c5	1996/03/18 08:43:46	femy
14526	4 8 c6	1996/03/29 14:43:42	jeanine
fax 9550/0112	page 3/3	1995/12/15 14:52:57	sender: 905 522 8868
14526	4 14 0	1995/12/15 14:54:06	
14526	4 14 d1	1995/12/18 09:12:27	naomi
14526	4 14 c2	1995/12/19 09:22:55	naomi
14526	4 14 c3	1995/12/21 08:07:10	femy
14526	4 14 c5	1996/03/18 08:45:36	femy
14526	4 14 c6	1996/03/29 14:43:42	jeanine

## DF\_ATmods

List database modifications

---

When:               -t date1~date2 -w time1~time2  
 Who:                -u user(s)  
 Cases:              -l id(s) -S sequence(s) -P plate(s)  
 Levels:             -v validation level(s)  
 After Level:       -f level  
 Data Fields:       -din field(s) -dex field(s)  
 QC Fields:         -qin field(s) -qex field(s)  
 QC Problems:      -qprob {1,2,3,4,5,6,23}  
 Data Changes:     -d {new,mod,del,none,all}  
 QC Changes:       -q {new,mod,del,in,ex,none,all}  
 New Fields:        -N {data,qcs}  
 Sort:               -by case -by time

## DF\_ATmods

List database modifications

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### Examples:

Show modifications made between 7-8am this morning  
 -t today -w 070000~080000

Show modifications made by alice since Jan 1,2001  
 -t 20010101~today -u alice -by case

Show modifications made to fields 10 to 20 on plate 5  
 -t 19900101~today -P 5 -din 10~20 -by case

Show data records deleted in the month of April of 1996  
 -t 19960401~19960430 -d del -q none

## DF\_ATmods

Trace the history of plate 1 for patient 3503

---

-t 19940101~today ...from Jan 1,1994 to today  
 -l 3503 ...for patient ID 3503  
 -P 1 ...for plate 1

-d all ...show new,modified and deleted  
 data records (default)

-q all ...show new,modified and deleted  
 QC notes (default)

-qin 1,16,17 ...only check QC fields 1(status),  
 16(type) and 17(query)

-N qcs ...show these fields on New QCs as  
 well as on modified QCs

## DF\_ATmods

Trace the history of plate 1 for patient 3503

---

ID=3503 SEQ=0 PLT=1  
 1994/12/12 12:15:54 femy DATA: NEW RECORD at level 1, dirty

1994/12/12 16:26:53 mary QC: NEW at level 2, external, missing  
 10. Date of Birth  
     QC Status = 1 (new)  
     QC Reply Type = 2 (Refax)  
     QC Query = blank

1994/12/12 16:26:53 mary DATA: MODIFIED at level 2, dirty  
 2. DataFax Validation Level: 1 -> 2  
 22. Surgery Scheduled Time: 02:45 -> 07:45

1995/01/08 11:38:32 femy QC: MODIFIED at level 1, external, missing  
 10. Date of Birth  
     QC Status: 6 (sent to center) -> 5 (resolved corrected)

1995/01/08 11:38:32 femy DATA: MODIFIED at level 1, clean  
 1. DataFax Record Status: 2 (dirty) -> 1 (clean)  
 2. DataFax Validation Level: 2 -> 1  
 3. DataFax Raster Name: 9450/0031001 -> 9509/0031002  
 10. Date of Birth: blank -> 11/27/27

1995/01/28 11:51:02 mary DATA: MODIFIED at level 2, clean  
 2. DataFax Validation Level: 1 -> 2

## DF\_ATmods

show changes to field 8 since Jan 1/96

---

-t 19960101-today -din 8 -d mod -q none

DF\_ATmods: Database Changes For Study 7 Jan 17,2001 10:33 PAGE 1  
 -t 19960101-today -din 8 -q none -d mod

-----  
 ID=44513 SEQ=1 PLT=5  
 1996/01/02 08:33:58 femy DATA: MODIFIED at level 1, dirty  
 8. Patient Initials: PLM -> RLM

-----  
 ID=222505 SEQ=3 PLT=8  
 1996/01/03 10:46:46 naomi DATA: MODIFIED at level 2, clean  
 8. Patient Initials: C-S -> C\_S

-----  
 ID=82507 SEQ=5 PLT=8  
 1996/01/03 11:30:21 naomi DATA: MODIFIED at level 2, clean  
 8. Patient Initials: AFE -> RFE

-----  
 ID=10539 SEQ=4 PLT=8  
 1996/01/03 14:33:23 naomi DATA: MODIFIED at level 1, dirty  
 8. Patient Initials: MGS -> HGS

## DF\_ATmods

show changes to field 8 since Jan 1/96 by case

---

-t 19960101-today -din 8 -d mod -q none -by case

DF\_ATmods: Database Changes For Study 7 Jan 04,2001 08:40 PAGE 2  
 -t 19960101-today -by case -din 8 -q none -d mod

-----  
 ID=9524 SEQ=4 PLT=13  
 1996/03/06 13:20:01 jeanine DATA: MODIFIED at level 5, dirty  
 8. Patient Initials: SCB -> SCG

-----  
 1996/03/18 09:32:19 naomi DATA: MODIFIED at level 1, clean  
 8. Patient Initials: SCG -> SCB

-----  
 ID=10529 SEQ=2 PLT=10  
 1996/01/19 15:02:10 femy DATA: MODIFIED at level 6, clean  
 8. Patient Initials: MLM -> MIM

-----  
 ID=10532 SEQ=5 PLT=8  
 1996/01/19 15:00:45 naomi DATA: MODIFIED at level 1, dirty  
 8. Patient Initials: EHT -> FHT

## Center Tracking Reports

DF\_CTcrfs, DF\_CTqcs, DF\_CTvisits

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**Show CRF processing delays, query rate and time to clean by center:**

- which centers deserve praise and which need encouragement to do better?
- is data management able to keep up with the incoming fax traffic?
- how long will it likely take to reach "all clean" status after the last patient visit?
- what assessments account for the longest delays?

## DF\_CTcrfs

records processed since Dec 1,1995 excluding raw entry

---

**- t 95/12/01 - R**

DF\_CTcrfs: CRF Processing by Center. DFstudy 7. Feb 28,1999 22:34 PAGE 1

For CRF Pages in the Visit Map - Visits Since 95/12/01

CENTER Number	ACTIVITY			MEAN # Fax In	DAYS FROM VISIT TO:			% RECORDS CLEAN	
	Patients	Visits	Records		DB Entry	DB Clean	On Arrival	Now	
1	11	21	72	10.1	10.7	13.3	73.6	100.0	
2	2	7	23	27.8	29.1	34.0	69.6	100.0	
3	4	6	15	19.9	21.3	246.7+	66.7	80.0	
4	6	17	56	31.8	32.9	215.8+	67.9	83.9	
5	4	9	32	3.3	4.1	6.5+	62.5	96.9	
9	13	40	131	8.5	9.6	29.3+	70.2	98.5	
10	33	100	324	2.4	2.7	9.0+	59.6	99.7	
11	12	48	155	1.2	1.7	10.5+	78.7	99.4	
...									

## DF\_CTcrfs

what visits account for the longest delays?

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Use the -V option to exclude records for specified visits  
e.g. -V 0~3,5~999 ...will only include visit 4

```
#!/bin/sh
#Show DF_CTcrfs TOTAL separately for visits 0,1,2,3,4,5

study=7
T="-t 96/01/01~96/04/26"

DF_CTcrfs $study $T -V 1~999 | sed -n "1,8p;/^TOTAL/s/TOTAL /VISIT 0/p"

for S in 1 2 3 4 5
do
# set V (visit number exclusion list) to exclude all but S
V=`nawk 'BEGIN{ x=" '$S' "; printf"0~%d,%d~999",x-1,x+1 }`
DF_CTcrfs $study $T -V $V | sed -n "/^TOTAL/s/TOTAL /VISIT $$/p"
done
```

## DF\_CTcrfs

what visits account for the longest delays?

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DF\_CTcrfs: CRF Processing by Center. DFstudy 7. Jan 03,2001 20:52 PAGE 1

For CRF Pages in the Visit Map - Visits Between 96/01/01 and 96/04/26

CENTER Number	ACTIVITY			MEAN # DAYS FROM VISIT TO:			% RECORDS CLEAN	
	Patients	Visits	Records	Fax In	DB Entry	DB Clean	On Arrival	Now
VISIT 0	266	266	266	4.4	5.0	122.2+	43.2	93.6
VISIT 1	247	247	1974	8.7	9.1	95.1+	56.3	95.2
VISIT 2	232	232	235	10.4	11.2	174.0+	36.6	91.1
VISIT 3	228	228	681	8.1	8.5	36.7+	65.2	98.5
VISIT 4	261	261	782	5.8	6.1	72.0+	61.3	96.3
VISIT 5	261	261	1036	6.3	6.6	58.6+	58.1	97.2

### DF\_CTqcs

show query and query resolution rates

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DF\_CTqcs: QC Notes by Center. DFstudy 7. Jan 04,2001 15:42 PAGE 1

External QC Notes - Created Since 95/12/01

CENTER Number	TOTAL RECORDS	TOTAL QCS	RATE/100 REC	RESOLVED #	QCS %	QC STATUS Correct	TIME N.A.	TO Irrel.	RESOLUTION DAYS
1	177	44	25	44	100	43	1	0	19
2	45	14	31	9	64	8	0	1	20
3	50	13	26	5	38	5	0	0	34
4	220	44	20	8	18	7	1	0	91
5	50	16	32	15	94	15	0	0	11
9	173	40	23	39	98	36	3	0	14
10	452	114	25	107	94	106	1	0	10
11	176	9	5	8	89	8	0	0	14
...									
216	29	21	72	10	48	10	0	0	25
222	195	63	32	63	100	55	8	0	15
270	71	84	118	42	50	35	7	0	53
TOTAL	8991	2570	29	2007	78	1914	72	21	21

### DF\_CTqcs

show age of unresolved queries (-u option)

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DF\_CTqcs: QC Notes by Center. DFstudy 7. Jan 04,2001 15:42 PAGE 1

External QC Notes - Created Since 95/12/01

CENTER Number	TOTAL RECORDS	TOTAL QCS	RATE/100 REC	RESOLVED #	QCS %	AGE (DAYS) OF UNRESOLVED QCS				
						<=10	11-20	21-30	31-60	>60
1	177	44	25	44	100					
2	45	14	31	9	64			5		
3	50	13	26	5	38					8
4	220	44	20	8	18			20	13	3
5	50	16	32	15	94		1			
9	173	40	23	39	98	1				
10	452	114	25	107	94	7				
11	176	9	5	8	89	1				
...										
216	29	21	72	10	48	11				
222	195	63	32	63	100					
270	71	84	118	42	50	35				7
TOTAL	8991	2570	29	2007	78	195	54	89	133	92

## DF\_IC\*

Study setup and database integrity checks

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After a new or changed study setup:

- DF\_ICschema       - study schema
- DF\_ICvisitmap     - study visit map

Before sending QC reports:

- DF\_ICkeys         - key fields and initials
- DF\_ICvisitdates   - VisitDate style fields

After a system crash / power failure:

- DF\_ICrecords      - data records
- DF\_ICqcs          - QC notes
- DF\_ICimages       - CRF image files

## Checking Study Setup

A Few Examples of What Gets Checked

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### DF\_ICschema (16 checks)

- is each variable description unique?
- for choice fields, are the box codes unique?
- is total record length <=4096 characters?

### DF\_ICvisitmap (23 checks)

- are visit numbers legal, unique, ascending?
- is a VisitDate defined for all scheduled and termination visits?
- correct scheduling of different visit types (e.g. screening, pre-baseline, baseline, follow-up)?

## DF\_SSschema

check setup by listing current schema details

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- f ...list plate descriptions.
- p plates ...list field specifications for the specified plates.
- s ...list fields with skip patterns.
- e ...list fields with edit checks.
- m "str" ...list fields containing str anywhere in the field definition.

## DF\_SSschema / DF\_SSvars

string matching examples

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- | OPTIONS              | List fields with:                   |
|----------------------|-------------------------------------|
| -m "str1" "str2"     | ...str1 or str2                     |
| -M "str1" "str2"     | ...str1 and str2                    |
| -m "^%A requir"      | ...value is required                |
| -m "^%c 0"           | ..."no choice" coded 0              |
| -m "^%c [^0]"        | ..."no choice" not coded 0          |
| -m "[0-9]+ [Kk][Gg]" | ...number space kg,Kg,KG, or kG     |
| -m "n\.n"            | ...a decimal format                 |
| -m "^%[JKjk] "       | ...edit checks                      |
| -m "^%[JKjk] .*age"  | ...edit checks with age in the name |

## DF\_SSschema

list fields with edit checks on plate 1

---

-p 1 -m "^%[JKjk]"

DF\_SSschema: Study Database Schema. DFstudy 7. Jan 14, 2001 19: 40 PAGE 1

001	8+	INIT	Patient Initials <init> string Initials 3 SetInit = edit check on field enter
001	10+	bdate	Date of Birth date birthdate F=MM/DD/yy L=01/01/00-12/31/80 Pivot= 1900 Imputation= middle of month and/or year checkage = edit check on field exit
001	13.	raceoth	Race - Other, specify string SimpleString 20 checkrace = edit check on field exit
001	14+	asaNY	Taken any ASA past 5 days choice NoYes L=0, 1, 2 1=No 2=Yes QCB = edit check on field exit
001	20.	asa5	total dose of asa int SimpleNumber 5 asasum3 = edit check on field enter
etc.			

## DF\_SSvars

list fields with edit checks on plate 1

---

-p 1 -m "^%[JKjk]" -S v, D, J, K, j, k "%-10s %-30s %s, %s, %s, %s"

DF\_SSvars: Variable Specifications. DFstudy 7. Jan 14, 2001 19: 36 PAGE 1

PLATE 001 Patient Entry Form (page 1 of 1) (28 fields)  
DFSEQ: in the barcode, TYPE: Required

7+	id	Patient No.	, , PlateEntryTime, PlateExitTime
8+	init	Patient Initials	SetInit, , ,
10+	bdate	Date of Birth	, checkage, ,
13.	raceoth	Race - Other, specify	, checkrace, ,
14+	asaNY	Taken any ASA past 5 days	, QCB, ,
20.	asa5	total dose of asa	asasum3, , ,
21+	elig	Pt satisfy all criteria?	, QCB, ,

## Checking Keys & Visit Dates

before QCreports, DFsas, reports, etc.

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### DF\_ICkeys

- IDs not defined in the center database
- Plates not defined in the study setup (file map)
- Visit/Seq numbers not defined in the schema, visit map, or page map
- Patient Initials

### DF\_ICvisitdate

- illegal and blank values
- inconsistencies btw VisitDates at same Visit/Seq
- VisitDates which appear out of order (by Visit/Seq)

## DF\_ICkeys

check ID, SEQ and PLT on data records and QC notes

---

DF\_ICkeys: Check Key Fields (ID,SEQ,PLT,Initials) DFstudy 7. Jan 04,2001 15:54

```

Plate 001:    1 errors in 1665 records (1 IDs)
Plate 002:    0 errors in 1675 records
Plate 003:    1 errors in 1333 records (1 Seqs)
Plate 004:    0 errors in 1705 records
Plate 005:    0 errors in 1542 records
Plate 006:    0 errors in 1253 records
Plate 007:    0 errors in 1303 records
Plate 008:    0 errors in 4616 records
Plate 009:    0 errors in 1425 records
Plate 010:    0 errors in 1651 records
Plate 011:    0 errors in 1308 records
...
Plate 069:    0 errors in    5 records
Plate 070:    0 errors in   42 records
Plate 080:    0 errors in    0 records
Plate 511:    7 errors in 9558 records (7 IDs)

```

```

Total:      12 errors in 40762 records
Use DF_ICkeys.drf to review problem records.

```

## DF\_ICkeys

check consistency of patient initials on data records

---

-I 8 -K none -P 1-80

DF\_ICkeys: Check Key Fields (ID,SEQ,PLT,Initials) DFstudy 7. Jan 04,2001 16:22

```

Plate 001:    26 errors in 1665 records (26 Initials)
Plate 002:    60 errors in 1675 records (60 Initials)
Plate 003:    43 errors in 1333 records (43 Initials)
Plate 004:    56 errors in 1705 records (56 Initials)
Plate 005:    56 errors in 1542 records (56 Initials)
Plate 006:    49 errors in 1253 records (49 Initials)
Plate 007:    49 errors in 1303 records (49 Initials)
Plate 008:   217 errors in 4616 records (217 Initials)
Plate 009:    56 errors in 1425 records (56 Initials)
Plate 010:    62 errors in 1651 records (62 Initials)
Plate 011:    60 errors in 1308 records (60 Initials)
...
Plate 069:     0 errors in    5 records
Plate 070:     1 errors in   42 records (1 Initials)
Plate 080:     0 errors in    0 records

```

Total: 1373 errors in 31204 records  
Use DF\_ICkeys.drf to review problem records.

## DF\_ICvisitdates

check for problem VisitDate fields

---

DF\_ICvisitdates: Inconsistent+Illegal VisitDates. DFstudy 7. Jan 11,2001 10:27

NO VISIT DATE INCONSISTENCIES

ILLEGAL VISIT DATES

DataFax Retrieval File = /opt/studies.local/ace960426/work/VDillegal.drf

Illegal visit dates detected by DF\_XXkeys

DF\_XXkeys was run by dwt 01/01/04

PATIENT	SEQNO	DATE	PLATES
4503	2	blank	10
56504	5	blank	15
81502	3	blank	11

VISIT DATES WHICH APPEAR TO BE OUT OF ORDER

DataFax Retrieval File = /opt/studies.local/ace960426/work/VDorder.drf

Problem dates detected in file DFX\_visit.dates created by DF\_XXkeys

DF\_XXkeys was run on Jan 4 14:40

PATIENT	SEQNO	PLATE	DATE	SEQNO	PLATE	DATE
3506	3	11	05/09/95	4	13	03/09/95
3511	3	11	05/29/95	4	13	05/02/95
4503	1	2	04/26/95	2	10	28/04/95

## Checking Database Integrity

after a system crash

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### DF\_ICrecords

- are study and plate numbers correct in each data record?
- does each data record have the correct number of fields?
- do creation and modification date fields have the correct format?

### DF\_ICqcs

- are there any duplicate or free floating QC notes?
- are there any unresolved QC notes on "clean" records?

### DF\_ICimages

- does a CRF image exist for each data record?
- does a data record exist for each CRF image?

## DF\_PT\*

Patient Tracking Reports

---

### What's the status of Patient Visits & CRFs?

- |               |                                |
|---------------|--------------------------------|
| DF_PTvisits   | - visits received,next,overdue |
| DF_PTcrfs     | - status of CRFs at each visit |
| DF_PTschedule | - entry, last and next visit   |

### What's missing and unresolved?

- |              |                           |
|--------------|---------------------------|
| DF_PTqcs     | - key fields and initials |
| DF_PTmissing | - VisitDate style fields  |

### Create a patient data listing

- |           |                |
|-----------|----------------|
| DF_PTlist | - data records |
|-----------|----------------|

## DF\_PTvisits

list visits 0 to 5 for patients 10501 and 10551 and  
flag any that are 15 or more days early or late

---

-i 10501,10551 -e 15 -l 15 -v 0-5

DF\_PTvisits: Visits received,next,overdue. DFstudy 7. Jan 12,2001 08:23 PAGE 1

10501	1	0 P Randomization	-7	0	-6	08/05/94	in
10501	1	1 P History	-2	0	0	08/11/94	in
10501	1	2 B Surgery	0	0	0	08/11/94	in
10501	1	3 S Discharge	5	7	5	08/16/94	in
10501	1	4 S 30 Day Follow-u	30	7	48	09/28/94	in+18
10501	1	5 T 3 Month Follow-	90	7	96	11/15/94	in done
10551	1	0 P Randomization	-7	0	-15	02/22/96	in
10551	1	1 P History	-2	0	-15	02/22/96	in
10551	1	2 B Surgery	0	0	0	03/08/96	in
10551	1	3 S Discharge	5	7	5	03/13/96	in
10551	1	4 S 30 Day Follow-u	30	7	30	04/07/96	next 1716 days ...
10551	1	5 T 3 Month Follow-	90	7			1656 days overdue

Note: Overdue status was calculated by DF\_QCupdate as of 20001218.  
Visits were overdue if scheduled before this date or before patient termination.

## DF\_PTvisits

list all visits for patients in which visits 0 to 5  
are early or late by 100 or more days

---

-E 100 -L 100 -A -v 0-5

DF\_PTvisits: Visits received,next,overdue. DFstudy 7. Jan 12,2001 08:37 PAGE 1

10544	1	0 P Randomization	-7	0	-4	01/05/96	in
10544	1	1 P History	-2	0	-369	01/05/95	in-367
10544	1	2 B Surgery	0	0	0	01/09/96	in
10544	1	3 S Discharge	5	7	4	01/13/96	in
10544	1	4 S 30 Day Follow-u	30	7	36	02/14/96	in
10544	1	5 T 3 Month Follow-	90	7	92	04/10/96	in done
49507	1	0 P Randomization	-7	0	-162	09/14/94	in-155
49507	1	1 P History	-2	0	-162	09/14/94	in-160
49507	1	2 B Surgery	0	0	0	02/23/95	in
49507	1	3 S Discharge	5	7	2	02/25/95	in
49507	1	4 S 30 Day Follow-u	30	7	19	03/14/95	in
49507	1	5 T 3 Month Follow-	90	7	369	02/27/96	in+279 done

Note: Overdue status was calculated by DF\_QCupdate as of 20001218.  
Visits were overdue if scheduled before this date or before patient termination.

### DF\_PTcrfs

check status of CRFs for patients 10501 and 10502

---

-i 10501-10502

DF\_PTcrfs: CRFs Plates Received at Each Visit. DFstudy 7. Jan 12, 2001 09:58

**QC CODES (ordered by priority):**  
 r = outstanding refax request  
 ? = unresolved Q&A note  
 i = unresolved internal QC note  
 + = dirty but no unresolved QC notes

**OTHER CODES:**  
 - = missing page  
 x = registered in the lost data log  
 \* = error status (missing keys)  
 NA = visit date is coded Not Available

ID#	VISIT	CRF PLATES
10501	0 08/05/94	1
10501	1 08/11/94	2 3 4 5 6 7 8 9?
10501	4 09/28/94	8 13 14
10501	5 11/15/94	8 14r 15 19
10502	0 09/30/94	1
10502	1 09/30/94	2 3 4+ 5 6 7 8 9
10502	2 10/04/94	10
10502	3 10/11/94	8 11 12
10502	4 11/02/94	8- 13 14
10502	5 01/05/95	8 14 15 19

### DF\_PTqcs

check status of QC Notes for patients 62501 to 62505

---

-I 62501-62505

DF\_PTqcs: QC Notes by Patient. DFstudy 7. Jan 12, 2001 10:30 PAGE 1

External QC Notes - Created Since Start Of Study

PATIENT ID#	TOTAL RECORDS	TOTAL QCS	RATE/100 REC	RESOLVED #	QCS %	QC STATUS & TIME TO RESOLUTION			DAYS
						Correct	N.A.	Irrel.	
62501	23	35	152	35	100	33	1	1	54
62502	35	25	71	24	96	24	0	0	30
62503	23	12	52	12	100	12	0	0	26
62504	27	17	63	15	88	15	0	0	32
62505	30	25	83	23	92	19	0	4	54
<b>TOTAL</b>	<b>138</b>	<b>114</b>	<b>83</b>	<b>109</b>	<b>96</b>	<b>103</b>	<b>1</b>	<b>5</b>	<b>43</b>

  

PATIENT ID#	AGE (DAYS) 00-10	AGE (DAYS) 11-20	AGE (DAYS) 21-30	AGE (DAYS) 31-60	AGE (DAYS) > 60	AGE (DAYS) 00-10	AGE (DAYS) 11-20	AGE (DAYS) 21-30	AGE (DAYS) 31-60	AGE (DAYS) >60
62502	0	0	0	0	1	0	0	0	0	0
62504	0	0	0	0	2	0	0	0	0	0
62505	0	0	0	0	2	0	0	0	0	0
<b>TOTAL</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

## DF\_PTmissing

list missing CRFs and overdue visits for patients at  
center 3 using page map labels

---

-c 3 -p

DF\_PTmissing: Missing Data by Patient. DFstudy 7. Jan 12,2001 10:40

PATIENT ID	VISIT	PROBLEM
3506	11	Missing Plates: Form 7.5 stroke
3511	11	Missing Plates: Form 7.5 stroke
3512	5	Overdue Visit: 3 Month Follow-up
3512	11	Missing Plates: Form 7.5 stroke
3514	5	Overdue Visit: 3 Month Follow-up
3515	5	Overdue Visit: 3 Month Follow-up
3516	1	Overdue Visit: History
3516	2	Overdue Visit: Surgery
3516	3	Overdue Visit: Discharge
3516	4	Overdue Visit: 30 Day Follow-up
3516	5	Overdue Visit: 3 Month Follow-up

## DF\_PTlist

data listings for specified patients

---

-X 1 9 -X 2 9 56 -X 3 9 35 -X 4 23 24 -X 5 9 -I 1501-1505 -t

DF\_PTlist: Patient Data Listings. DFstudy 7. Jan 12,2001 11:05

PATIENT	VISIT	edate	vdate1	hxtias	hxstroke	hxcvd	angio	angioldt	curmeds
001501	0	03/30/95	.	.	.	.	.	.	.
001501	1	. 04/12/95		No	No	No	Yes	03/08/95	no
001502	0	06/05/95	.	.	.	.	.	.	.
001502	1	. 06/05/95		No	Yes	Yes	Yes	06/06/95	no
001503	0	07/04/95	.	.	.	.	.	.	.
001503	1	. 07/04/95		Yes	Yes	No	Yes	07/05/95	no
001504	0	07/08/95	.	.	.	.	.	.	.
001504	1	. 07/09/95		No	No	No	Yes	07/06/95	no
001505	0	07/24/95	.	.	.	.	.	.	.
001505	1	. 07/24/95		No	No	Yes	Yes	07/24/95	no

## DF\_PTlist

normalized listing of medications at visit 1

```
-v 1 -I 11501~11503 -s "if(length(x[1])>0)"
-x 5 10 %-20.20s 11 %-10s 12 %-10s 13 %-20.20s
-R 5 14~17 -R 5 18~21 -R 5 22~25 -R 5 26~29
```

DF\_PTlist: Patient Data Listings. DFstudy 7. Jan 12,2001 12:42

PATIENT	VISIT	drugname	drugmg	drugwhen	drugwhy
011501	1	acetylsalicyclic aci	650	07/00/94	tia/stroke
011501	1	ipratropium	2puffs x4	years	chronic bronchitis
011501	1	salbutamol	2puffs x4	years	chronic bronchitis
011502	1	acetylsalicyclic acid	650	03/00/94	tia's
011502	1	captopril	50	years	hypertension
011502	1	chlorthaliodone	50	years	hypertension
011502	1	slow k	600	years	to prevent hypokalem
011503	1	acetylsalicyclic acid	650	10 y	stroke/heart attack
011503	1	fosinopril sodium	10	5 y	Hypertension
011503	1	lovastatin	20	3 y	hypercholesterolemia
011503	1	vitamin e	800 i.u.	1 y	nutritional suppleme

## DF\_PTlist

listing medications for hypertension

```
-v 1 -I 11501~11509 -s "if(x[4]~/[Hh]ypertension/)"
-x 5 10 %-20.20s 11 %-10s 12 %-10s 13 %-20.20s
-R 5 14~17 -R 5 18~21 -R 5 22~25 -R 5 26~29
```

DF\_PTlist: Patient Data Listings. DFstudy 7. Jan 12,2001 12:50

PATIENT	VISIT	drugname	drugmg	drugwhen	drugwhy
011502	1	captopril	50	years	hypertension
011502	1	chlorthaliodone	50	years	hypertension
011503	1	fosinopril sodium	10	5 y	Hypertension
011506	1	nifedipine	60	3 y	hypertension
011508	1	enalapril	25	years	hypertension
011509	1	atenolol	50	10 y	hypertension
011509	1	felodipine	10	10 y	hypertension
011509	1	hydrochlorothiazide	12.5	10 y	hypertension

### DF\_stats

descriptive statistics for fields 23 to 26 on plate 4

---

- P 4 - F 23-26

DF\_stats: Simple Descriptive Statistics. DFstudy 7. Jan 15, 2001 14: 08

DF\_stats for Plate 4 ACE demo Jan 15, 2001 14: 08 Page 1

23. angio: Angiography performed?			
1 = No	133	11.57%	
2 = Yes	1017	88.43%	
24. angiody: Angiography Date			
Legal Dates	1016	88.35%	
Date Range	12/07/90-12/15/96		
Blank Fields	134	11.65%	
25. p004v19: Type of Angiography			
Text Found	994	86.43%	
Text Length		3-100	
Blank Fields	147	12.78%	
Missing Values	9	0.78%	
26. p004v20: Percentage Stenosis- Right			
Legal Values	950	82.61%	
Mean		58.54	
Standard Deviation		34.77	
Range		0-100	
Illegal Values	33	2.87%	
Blank Fields	148	12.87%	
Missing Values	19	1.65%	

### DF\_stats

statistics by sex (visit 0, plate 1, field 11)

---

- P 4 - F 23-26 -G 0 1 11 1 Men 2 Women

	Men (N=809)		Women (N=371)	
23. angio: Angiography performed?				
1 = No	87	10.75%	46	12.40%
2 = Yes	700	86.53%	316	85.18%
Missing Records	22	2.72%	9	2.43%
24. angiody: Angiography Date				
Legal Dates	699	86.40%	316	85.18%
Date Range	12/07/90-11/20/96		03/19/91-12/15/96	
Blank Fields	88	10.88%	46	12.40%
Missing Records	22	2.72%	9	2.43%
25. p004v19: Type of Angiography				
Text Found	682	84.30%	311	83.83%
Text Length		3-100		3-76
Blank Fields	98	12.11%	49	13.21%
Missing Values	7	0.87%	2	0.54%
Missing Records	22	2.72%	9	2.43%
26. p004v20: Percentage Stenosis- Right				
Legal Values	654	80.84%	295	79.51%
Mean		58.08		59.56
Standard Deviation		35.17		33.96
Range		0-100		0-100
Illegal Values	23	2.84%	10	2.70%
Blank Fields	99	12.24%	49	13.21%
Missing Values	11	1.36%	8	2.16%
Missing Records	22	2.72%	9	2.43%



### DF\_WFfaxes

show fax processing in the 1st 2 days of 1996

---

-t 96/01/01-96/01/02

DF\_WFfaxes: 96/01/01-96/01/02 DFstudy 7. Jan 15,2001 15:49 Page 1

FAX#	#PAGES	FAX ARRIVAL	DATA ENTRY	DELAY(hr)	ENTRY(min)	Min/Page
96010001	1	96/01/01 17:14	96/01/02 09:46	16.5		
96010002	5	96/01/01 19:25	96/01/02 09:47	14.4	1.1	0.3
96010004	1	96/01/01 19:25	96/01/02 09:47	14.4		
96010006	3	96/01/02 09:57	96/01/02 10:09	0.2	0.3	0.2
96010007	3	96/01/02 10:22	96/01/02 11:45	1.4	1.6	0.8
96010008	4	96/01/02 11:29	96/01/02 11:47	0.3	0.4	0.1
96010009	7	96/01/02 12:11	96/01/02 14:10	2.0	0.9	0.1
96010010	12	96/01/02 13:16	96/01/02 14:05	0.8	1.8	0.2
96010011	3	96/01/02 13:29	96/01/02 14:07	0.6	2.6	1.3
96010012	3	96/01/02 13:40	96/01/02 14:02	0.4	2.4	1.2
96010013	1	96/01/02 13:43	96/01/02 14:02	0.3		
96010014	2	96/01/02 14:48	96/01/02 15:27	0.7	0.1	0.1
96010015	1	96/01/02 14:50	96/01/02 15:28	0.6		

### DF\_WFcrfs

show daily CRF processing by femy for Jan 1-15,1996

---

DF\_WFcrfs: Work Flow - CRFs Validated per Day. DFstudy 7. Feb 28, 1999 22:59

DATE	FROM	TO	PRIMARY RECORD VALIDATIONS PERFORMED							FINAL STATUS OF ALL CRFS						
			V1	V2	V3	V4	V5	V6	V7	TOTAL	PRc	PRd	Pre	SEC	DEL	TOTAL
951215	09:01	12:53	38		54					92	25	40		3	1	69
951220	08:03	15:48			122					122	57	65				122
951221	07:52	15:33			286					286	268	18				286
951222	08:37	13:19			243					243	204	39				243
960102	08:29	13:09	215		64					279	57	184		72		313
960103	09:04	12:58			219			1		220	170	50				220
960104	08:36	14:34	25		84					109	81	28		10		119
960105	08:53	15:13			161		46			207	173	34				207
960108	08:25	15:27			74		65			139	125	14				139
960109	08:39	16:01			86		74			160	147	13		2		162
960110	08:22	15:09			10		164			174	169	5				174
960111	08:18	15:48			74		87			161	152	9				161
960115	08:27	15:36			196		38			234	208	26		1		235
<b>TOTAL</b>			<b>278</b>		<b>1673</b>		<b>475</b>			<b>2426</b>	<b>1836</b>	<b>525</b>		<b>88</b>	<b>1</b>	<b>2450</b>
<b>MEAN / DAY</b>			<b>21</b>		<b>129</b>		<b>37</b>			<b>187</b>	<b>141</b>	<b>40</b>		<b>7</b>		<b>188</b>
<b>VALIDATION TIME hrs</b>			<b>1.3</b>		<b>19.0</b>		<b>5.7</b>			<b>26.1</b>						
<b>FOR VALIDATIONS</b>			<b>267</b>		<b>1528</b>		<b>411</b>			<b>2206</b>						
<b>SEC / VALIDATION</b>			<b>18</b>		<b>45</b>		<b>50</b>			<b>43</b>						
<b>VALIDATIONS &lt; 5sec</b>			<b>8</b>							<b>8</b>						
<b>TOTAL VALIDATIONS</b>			<b>279</b>		<b>1694</b>		<b>476</b>			<b>2449</b>						
<b>EST TOTAL TIME hrs</b>			<b>1.4</b>		<b>21.1</b>		<b>6.6</b>			<b>29.1</b>						

### DF\_WFqcs

show plate 1 QC processing summary for Jan 1-15,1996

---

-P 1 -t 960101-960115

DF\_WFqcs: QC Note Processing per Day. DFstudy 7. Jan 15,2001 14:49

FOR ALL QUALITY CONTROL NOTES

DATE	FROM	TO	EXTERNAL QC NOTES				TOT	INTERNAL QC NOTES				TOT
			NEW	MOD	RES	DEL		NEW	MOD	RES	DEL	
960102	10:22	13:01	3		2		5					
960103	10:38	17:19	2		4		6			2		2
960104	11:47	16:23			2		2			1		1
960105	13:56	13:56	3				3					
960108	09:56	16:13	2	1	5		8					
960109	09:17	15:58	3		1		4			1		1
960110	11:18	16:06	3	1			4			1		1
960111	09:22	14:05	4			1	5	1				1
960112	09:00	16:30	3	1	2	1	7					
960115	10:33	15:13		3	1	1	5			2		2
TOTAL			23	6	17	3	49	1		7		8

### DF\_ATmods

list the 3 QC notes deleted on Jan 11,12,15,1996

---

-t 1996/01/11~1996/01/15 -P 1 -d none -q del

DF\_ATmods: Database Changes For Study 7 Jan 15,2001 14:53 PAGE 1

-t 1996/01/11~1996/01/15 -P 1 -d none -q del

-----

ID=54506 SEQ=0 PLT=1  
 1996/01/11 09:22:37 ?? QC: DELETED at level 3, external, other  
 23. Surgery Time, 24 hr clock

-----

ID=22521 SEQ=0 PLT=1  
 1996/01/12 16:30:27 ?? QC: DELETED at level 5, external, other  
 23. Surgery Time, 24 hr clock

-----

ID=101515 SEQ=0 PLT=1  
 1996/01/15 10:47:28 ?? QC: DELETED at level 3, external, other  
 7. Patient No.

## DF\_ATmods

who deleted the 3 QC notes on Jan 11,12,15,1996

```
-t 1996/01/11-1996/01/15 -P 1 -S 0 -I 54506,22521,101515 -by case

ID=22521 SEQ=0 PLT=1
1996/01/12 16:30:27 jeanine      DATA: MODIFIED at level 5, dirty
  2. DataFax Validation Level: 2 -> 5
 10. Date of Birth: 02/04/21 -> 02/04/28

1996/01/12 16:30:27 ??          QC: DELETED at level 5, external, other
 23. Surgery Time, 24 hr clock

-----
ID=54506 SEQ=0 PLT=1
1996/01/11 09:22:37 femy        DATA: MODIFIED at level 3, dirty
  2. DataFax Validation Level: 2 -> 3

1996/01/11 09:22:37 ??          QC: DELETED at level 3, external, other
 23. Surgery Time, 24 hr clock

-----
ID=101515 SEQ=0 PLT=1
1996/01/15 10:47:28 femy        DATA: MODIFIED at level 3, clean
  1. DataFax Record Status: 2 (dirty) -> 1 (clean)
 25. Completed by: 2 -> 1 (yes)

1996/01/15 10:47:28 ??          QC: DELETED at level 3, external, other
  7. Patient No.
```

## Creating Study Specific Reports

- **DFexport.rpc**
  - extract fields from a plate
  - print field names at the top of each column
  - convert codes to value labels
- **UNIX programs: awk, sort, uniq, wc, etc.**
  - filter records based on data field values
  - count cases meeting specified criteria
  - sort and format output
- **Study Reports Directory**
  - installing it here makes it available in the reports tool

## Check Surgical Schedule

---

Surgery must be scheduled within 1 week of patient entry.  
We need a program that will list any patients for whom surgery was scheduled >7 days after entry.

```
# Check Surgical Scheduling

# Export ID, Entry and Surgical dates and julian values for the dates
# from all primary plate 1 records for study 155, and print the field
# names in the first record, at the top of the output.
# 7=ID, 9=entry date, 22=surgical date, 9:j=entry jday, 22:j=surgical jday
DFexport.rpc -h -s primary -f 7,9,22,9:j,22:j 155 1 - | \

# Print the field names in record 1
# Skip any cases in which one or both dates are missing or invalid
# List records in which the scheduling delay is >7 days, and show the delay.
# Fields: 1=ID, 2=entry date, 3=surgical date, 4=entry jday, 5=surgical jday
nawk -F\| '{ if(NR==1) { print $0; next }
              if($4==0 || $5==0) next
              if($5-$4>7) print $0, $5-$4
            }'
```

## Output

---

```
id001|edate|surg0dt|edate|surg0dt
001501|03/30/95|04/13/95|2449806|2449820 14
001516|10/31/95|11/08/95|2450021|2450029 8
001519|11/22/95|12/01/95|2450043|2450052 9
003515|11/27/95|12/13/95|2450048|2450064 16
004514|12/01/95|12/12/95|2450052|2450063 11
009511|06/06/95|06/19/95|2449874|2449887 13
010526|08/31/95|09/08/95|2449960|2449968 8
010527|09/09/95|09/18/95|2449969|2449978 9
010543|11/28/95|12/14/95|2450049|2450065 16
010546|01/18/96|01/29/96|2450100|2450111 11
etc.
```

## Check Surgical Schedule

Version 2

```
# Check Surgery Schedule
# List the last 10 cases where surgery was scheduled >1 week after entry,
# or the number of cases specified by the user in the options list.

# Read the options list
if [ $# -gt 0 ]; then CASES=$1; else CASES=10; fi

# Print a title
echo "
Patients for whom surgery was scheduled more than a week after entry
PatientID   EntryDate   SurgSched   Delay(days)
"

# Export the data
DFexport.rpc -s primary -f 7,9,22,9:j,22:j 7 1 - | \

# Sort it on the 4th field (entry jday)
sort -t\| +3n -4 | \

# List cases in which the scheduling delay is >7 days
nawk -F\| '{ if($4==0 || $5==0) next
             if( $5-$4>7 ) printf"%9d   %s   %s   %3d\n", $1,$2,$3,$5-$4
             if( $5<$4 )  printf"%9d   %s   %s   ???\n", $1,$2,$3
           }' | \
# Print the last 10 (or user specified number of) cases
tail -$CASES
```

## Output

```
Patients for whom surgery was scheduled more than a week after entry
PatientID   EntryDate   SurgSched   Delay(days)

      75553   03/26/96   04/04/96     9
      65538   03/29/96   04/23/96    25
     131514   04/02/96   04/00/96    13
     222512   04/02/96   04/12/96    10
      92544   04/04/96   04/29/96    25
      65539   04/05/96   04/24/96    19
      71514   04/11/96   04/30/96    19
     103505   04/16/96   04/24/96     8
      80520   04/22/96   04/23/95    ???
      80521   04/23/96   05/07/96    14
```

## Finishing Touches

### online documentation for study specific reports

---

- **.info**
  - create online documentation which users can read using the reports tool Explain button (just like the standard DataFax reports)
  - create a plain text file named .info using your favorite editor
  - follow the same format used by the standard DataFax reports (\$DATAFAX\_DIR/reports/.info)
  - install your .info file in the study reports directory

## Finishing Touches

### setting user permissions for study specific reports

---

- **UNIX Permissions**
  - if only you are allowed to execute 'report'
  - chown mylogin myreport**
  - chmod u+x myreport; chmod go-x myreport**
  - to allow other datafax users, and block all others
  - chmod ug+x myreport; chmod o-x myreport**
- **DataFax Permissions**
  - use file ~/lib/.DFrep\_excl to grant user permissions, e.g.
  - myreport - \* +jack +jill**
  - myreport + \* -jack -jill**