



The Exciting World of Sub-Reports



- Help plan and manage a component of one of the challenges of reporting.
- Highlight some practical experience in creating/using sub-reports.
- Examples and discussions of some of the sub-reports in use.



Overview

- Background & History
- Reporting Challenges
- Benefits of Using Sub-reports
- Planning
- Gotchas



Background & Environment

History & Environment
Help to Define Your
Reporting Strategy



Pre-Conversion

- 2 technical staff supporting 40 users
- Development software, web site, servers, all desktop software, Microsoft Exchange, all hardware
- Long established “report intensive” fundraising program
Over 400 existing reports in place



Pre-Conversion

- Many complex reports based on an extensive data warehouse which had been in existence for over 8 years
- Users were used to a fast turnaround time on new requests (3 – 4 hours)
- 35,000 Entities, \$22 million + /year



Let's Do a Conversion

- Complex and difficult conversion from previous system
- Live on new system after 6 months
Gift, Biographical, Prospect Tracking
Membership
- Events – Scheduled in 1 year



Let's Do Stuff We Never Did Before

- Re-write all of our existing reports, data extraction programs, data warehouse, backup and restore, and everything else
- Take over additional data entry responsibilities from the Alumni Association
- Substantially increase content on the web site from 200 pages to 6,000+



Let's Do Stuff We Never Did Before

- Spend weeks in training.

“Buffer Cache (database): This test monitors database buffer cache efficiency by calculating the hit ratio (a high percentage indicates that most data blocks requested were already located in the cache. An occurrence is issued when the hit ratio exceeds the warning or critical thresholds sequentially a certain number of times.”

(1 paragraph from over 12 Oracle training manuals.)

- Silent phase of a campaign started July 1, 2000.
Much more volunteer driven than the last campaign

Let's Do Stuff We Never Did Before

- More tiers for reporting, very little of which were done previously
- New Campaign Reports
- Reports for Volunteers – Both paper and web based
- Reports for the Campus Executive
- Reports for other Campus Departments

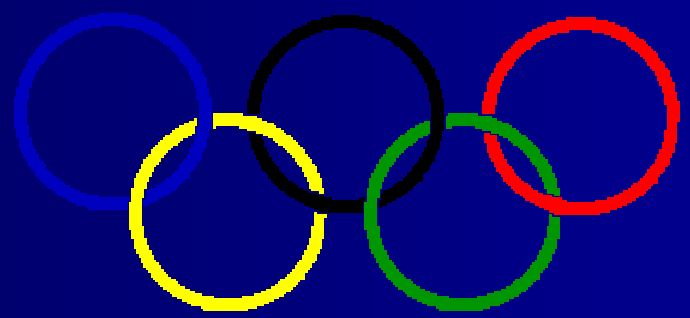


Let's Do Stuff We Never Did Before





Reporting Challenges





Reporting Challenges

- Reporting is often the most difficult and time consuming part of a conversion for technical staff
- User expectations are higher. Fonts, graphics, web, summary, data analysis
- Gift reporting and recognition is more complex. i.e. Family gifts, group donors, matching, behalf gifts



Reporting Challenges

- Lots of different sets of information in the new advancement software
- Multiple constituent groups with different reporting needs
- Data extraction and reporting tools are complex
- It takes technical staff a lot of time to create, test, and deploy reports



Reporting Challenges

- After all these years, users still don't often know what they really want until they see it on paper
- Users don't like change and want to see the same information in the same formats
- It's difficult for even experienced technical staff to ask all the right questions before a report is designed



Reporting Challenges

- SQL programming techniques do not always lend themselves easily to final report output

Reports for advancement activities typically use both large and small sets of information simultaneously

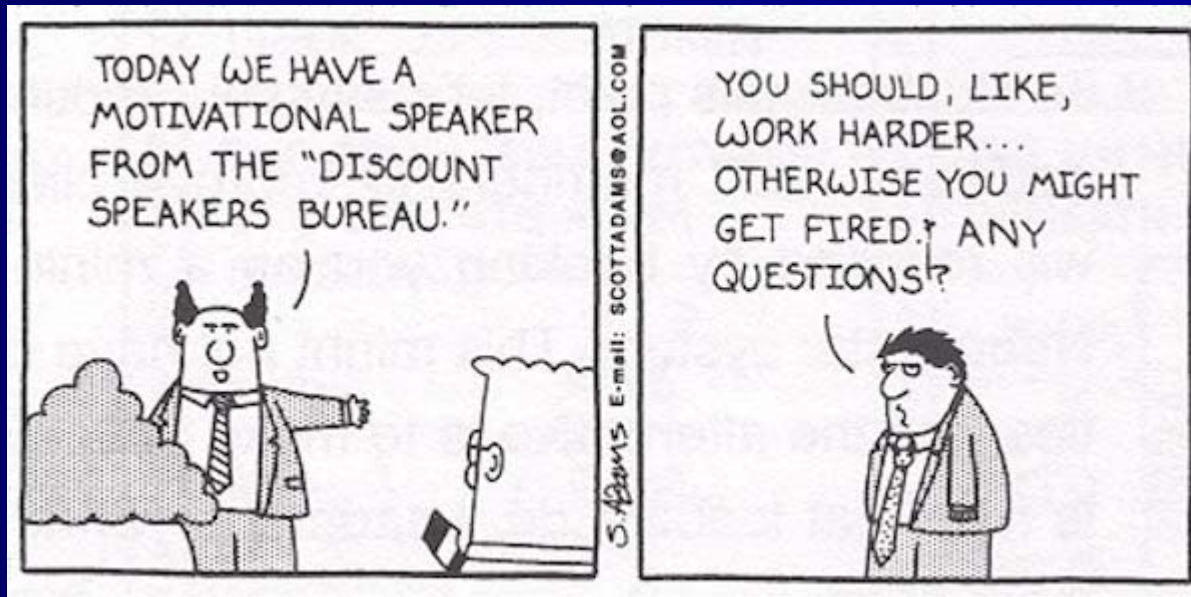


Challenges Met Within 6 Months of Conversion

- 175 reports accessible on the reports window in the new system
- 20 reports accessible from print other
- 50 reports not attached to Advance
- 30 adv_web reports on the web site
- 275 scripts for data extraction, etc.
- 125 tables in data warehouse
- Plus other stuff



Part of the Solution





Another Part

2	<u>ais sub address good</u>
	<u>ais sub note professional</u>
	<u>ais sub jobs other</u>
3	<u>ais sub note personal</u>
	<u>ais sub names</u>
4	<u>ais sub note community</u>
	<u>ais sub degrees</u>
	<u>ais sub note education</u>

Sub Reports



The Request

- I'd like a report with good home and business addresses, prospect assignments, the last 5 years giving, a current pledge payment schedule, recent activities, any entity notes, and any outstanding prospect tasks.





I.S. Reaction to the Request





Sub-Report Benefits

- Shorten report development time
- Reduces report complexity
- Write components once deploy many times
- Modify component once, update all reports



Sub-Report Benefits

- Easily retain high level set of information with all initial joins etc. in 1 table
- Lots of “new” ways to format and display your data by using combinations of composite reports with sub-reports imbedded in them
- Easier to display detail and summary data within the same reports

Sub-Report Benefits

- Fast prototyping of new reports using existing components users may already be familiar with
- Over time, creates a similar look and feel to all reports



Planning

Have a Plan in Place Before You Begin
Creating Reports



Building Blocks

- Analyze existing reports and report requests
- Start building your data warehouse
- Start with some of the more difficult reports first. Helps you think about components in the beginning.
- Enhance your data warehouse



Report Components

- 90% want some type of giving history
- 80% want home and business address
- 60% want who prospect is assigned to
- 20% want employment
- 30% want prospect Information
- 10% want relations



Report Components

- Where possible, think about creating sub-reports that look like the advancement system
- Creates similar “look and feel”
- Helps educate users about the system

+ Giving Summary				
President's Council FY 2000			Exp: June	30, 2000
<u>Credit</u>	<u>Gifts</u>	<u>Matching</u>	<u>Pledges</u>	<u>Balance</u>
Annual	\$1,015	\$0	\$0	\$0
Other	\$0	\$0	\$0	\$0
Totals	\$1,015	\$0	\$0	\$0
Last Transaction: \$83.26 Gift on Jun 30, 2000				



Manage Development

- Manage your report development process and don't duplicate efforts
- Make sure sub-reports are stored in separate libraries so it's easy to locate and use them
- Inform other technical staff of new and changed sub-reports



Naming Conventions

- Name your sub-reports in a meaningful way so you know what you're looking at.
- If you have to rename a sub-report that's used in a large number of reports, you have to add again to all reports referencing it. Lots of work.



Naming Conventions

- Use the comments when saving sub-reports. Helpful when you're looking at the entries in that library a month from now.
- Use imbedded names in your sub-reports. i.e. pr_ start preface all your prompt.
- When you go to insert a component, sorted names appear in the dialog box, so it's better if they're sorted consistently.



Naming Conventions

- ais_sub_degree_short
- ais_sub_degree_short_8_font
- ais_sub_degrees
- ais_sub_degrees_8_font



Different Fonts

- The same information with different font sizes is often required for the same sub-reports
- Create copies of sub-reports with the same information, different fonts, and name them appropriately

a_sub_address_good_8

a_sub_address_good_10



Performance

- Separate the extraction of data from the formatting and presentation of data wherever possible
- Analyze the relationship of the report and sub-reports to your data warehouse
- Try and limit the number of sub-reports and nested sub-reports



Performance

- Use stored procedures as the data source for your sub-reports. Stored procedures are already compiled and run more efficiently.
- Make sure client workstations have enough memory and disk space. Time how long it takes to run some reports on client machines.



Manage Users and Their Expectations

- Weekly e-mail to all users informing them of new reports added to Advance, and changes in any existing reports or report components
- Distribute revised report pages in PDF format so users can easily review any report changes
- Helps to inform users and also lets them see the progress of report development

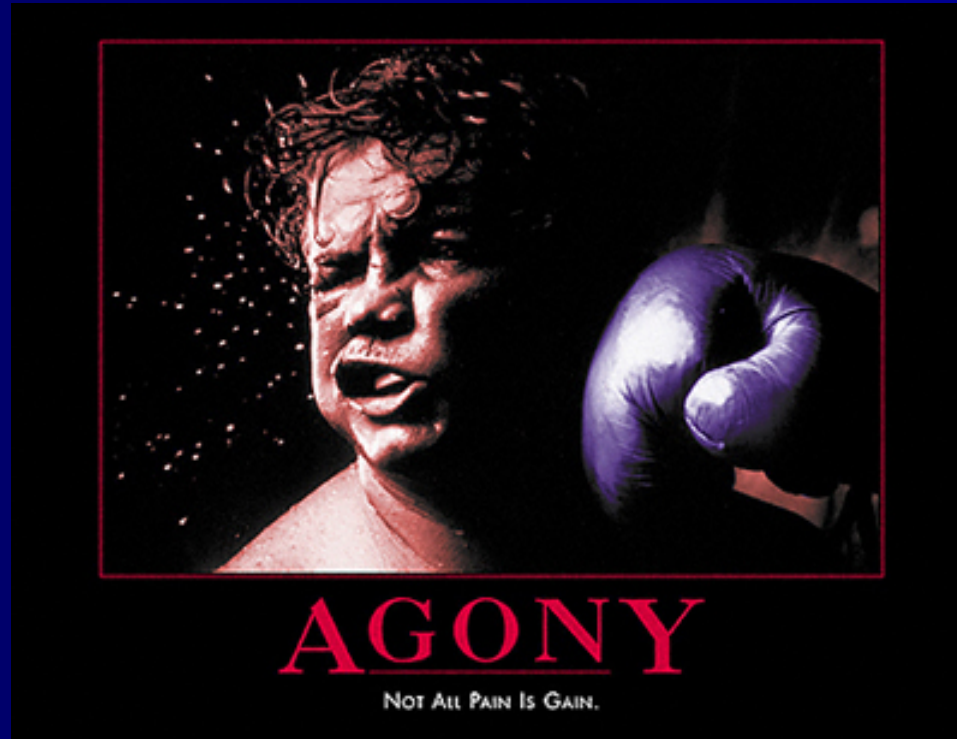


Manage Users and Their Expectations

- Add all reports to the system so users can run them whenever they need to
- Don't give them the report right away otherwise they won't think you're a miracle worker
- Try and give them a reasonable turnaround time
- Don't provide too many miracles otherwise they'll expect them all the time



Gotchas



Not All Pain is Gain
www.despair.com



The Request

- I'd like a report with good home and business addresses, prospect assignments, the last 5 years giving, a current pledge payment schedule, recent activities, any notes, and any outstanding prospect tasks.
- Can you add affiliations and membership activity for the last 3 years? I'd also like to see any outstanding proposals.





Report Writer Versions

- Different builds may have subtle differences that are not always obvious.
- Add complex data extractions with descriptions etc. to your data warehouse since complexity of queries within report writer is sometimes limited.



Complexity

■ Example – a_dw_assignment Table

PROSPECT_ID
ID_NUMBER
PREF_MAIL_NAME
PREF_NAME_SORT
PREF_CLASS_YEAR
ASS_ID_NUMBER
ASS_PREF_MAIL_NAME
ASS_PREF_NAME_SORT
ASS_INITIALS
ASS_PREF_CLASS_YEAR
ASS_TYPE
ASS_TYPE_DESC
ASS_ACTIVE_IND



The Request

- I'd like a report with good home and business addresses, prospect assignments, the last 5 years giving, a current pledge payment schedule, recent activities, any notes, and any outstanding prospect tasks.
- Can you add affiliations and membership activity for the last 3 years? I'd also like to see any outstanding proposals.
- How hard would it be to add relationships, but only immediate family?





Referencing

- Referencing sub-reports from higher level reports is difficult
- Include fields in the master report and use those to make sub-report visible/invisible
- Add tables to sub-report that are not joined but contain information to limit extractions. i.e. Fiscal Dates table.



Referencing

a_dw_fiscal_dates

CFY_BEG

CFY_BEG_MINUS_2

CFY_BEG_MINUS_3

CFY_BEG_MINUS_4

CFY_BEG_MINUS_5

You only need to
change this table
once a year

Filter in sub-report:

Date >

cfy_beg_minus_2

Includes information
within the last 2 years

When you change
a_dw_fiscal_dates all
reports will change



Argument Passing

- We instinctively tend to think about only using 1 argument such as `id_number` to pass to a sub-report
- Take advantage of the ability to pass multiple arguments to sub-reports.



Now That We're Done



The Request

- I'd like a report with good home and business addresses, prospect assignments, the last 5 years giving, a current pledge payment schedule, recent activities, any notes, and any outstanding prospect tasks.
- Can you add affiliations and membership activity for the last 3 years? I'd also like to see any outstanding proposals.
- How hard would it be to add relationships, but only immediate family?
- Oops, I forgot, I also need current employment.

Summary

- You can save yourself a lot of time and effort by developing a comprehensive, organized library of sub-reports.