



Upgrade to Siebel 8.0 Part I — Understanding and Planning Your Upgrade

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About Me – Robert Ponder

- Joined Siebel in 1998.
- Leading speaker on Siebel upgrades while at Siebel.
- World-wide PS performance and scalability lead for Siebel red account team.
- Ran first Siebel upgrade in 2000.
- Assisted/lead numerous upgrades for Siebel.
- Learned the Siebel upgrade on own and from the very best at Siebel.
- Well known within Siebel for answering hundreds of upgrade-related emails on the internal upgrade competency mailing list.
- Left Siebel in November 2005 to work for my wife!
- Currently working on Siebel upgrades and building cool Siebel utilities such as PPS Tools Helper© and PPS Transaction Profiler©.
- Lead Upgrade Architect and Director of Upgrade Services at Ponder Pro Serve.
- Upgrade Automation Analyst interested in improving the speed and accuracy of the Siebel upgrade by replacing manual tasks with automation.
- Wrote a relational database in 1983 before any were available.
- Former Lead DBA for an ERP software company.
- Member of IEEE and ACM. Read lots of books on computers and software.
- Siebel innovator: Among first to apply Use Cases, eX-Treme Programming, Agile Methods and Test-Driven Development to Siebel projects.
- Works in the field doing Siebel upgrades, Siebel performance tuning and tackling very tough technical problems such as Siebel crashes.



About Ponder Pro Serve

- Small company devoted to doing Siebel upgrades and performance tuning.
- Founded in October 2005.
- Husband and wife team working with a handful of Robert's former Siebel colleagues.
- Don't accept referral fees from our partners when we place their people with our customers.
- Unique in we offer software such as PPS Tools Helper© and PPS Transaction Profiler© for free to our customers when they engage us.
- PPS Tools Helper© is a suite of about 20 utilities that automate things normally done manually on Siebel upgrades.
 - Our V2E© utility is the best Siebel VB to eScript conversion tool on the market and is capable of saving lots of time and money.
 - Our Pretty Works© utility reformats eScript for perfect alignment.
- PPS Transaction Profiler© is a straightforward way to find out what in your Siebel application is slow and why it is slow.
 - Automation of techniques Robert manually performed while at Siebel.




An Offer You Can't Refuse. Take Your Choice of Either of These

- Find all occurrences of Siebel objects that are created but not destroyed and/or objects destroyed in the wrong order using PPS Tools Helper ScriptFinder©.
 - Any version of Siebel.
- Tell you which Siebel transactions are slow and why they are slow using PPS Transaction Profiler©.
 - Siebel 7.7, 7.8 and 8.0 only.
- You get a sample of what we find for free and then pay a reasonable fee for the full findings.
 - We rebate fee if you later engage us to help with your upgrade.



What We Did To Prepare For This

- Spent a lot of time working with 8.0
 - One of our customers was in the 8.0 beta program so we have been actively working with 8.0 and reading the 8.0 bookshelf for some time.
- Practiced what we preach by running upgrades for all the major versions of 7.x in our upgrade laboratory
 - SEA 7.5 -> 8.0
 - SIA 7.7 -> 8.0 (Fins)
 - SEA 7.8 -> 8.0



So How Long Will My Siebel 8.0 Upgrade Take?

- The answer is: it depends.
- Depends mainly on what “league” your upgrade is in.
 - We classify your upgrade’s degree of difficulty by the technical and other challenges you will face and the ability of you and your organization to deal with these challenges.
- Also depends on what your upgrade goals and objectives are and what other tasks beyond a pure technical upgrade are to be accomplished within the upgrade project.
- Safe to say your upgrade can not be accomplished in less than four (4) months unless it is a special simple case.
 - Basic formula for upgrade timeline based on project critical path. Could you do any of these in less than 1 month?
 - Planning and prep time.
 - Development upgrade time.
 - QA testing time.
 - Production upgrade and rollout time.



What League Is Your Upgrade In?

Complexity



High School

Simple scenarios that allow upgrade to be performed very fast

- Dev 7.8 to 8.0
- Demo Systems

Timeline:

Days or weeks

College

- Normal Siebel implementation without any really complicated challenges
- Hundreds of users
- Weekend of downtime available.

4+ Months

Pro

- Faces one or more really complicated issues
- 6.x with large code body
- Limited downtime
- Very large data volumes
- Organizational issues
- Thousands of users
- Huge impact to business if anything goes wrong
- Etc... There are lots of others

6-12+ months



Factors That Influence Your Time

- People
- Organizational Characteristics
- Size of Siebel implementation
- Complexity of implementation
- Criticality of Siebel to business
- Limited downtime or large database size
- New/changed Siebel modules
- New features added as part of the upgrade
- Upgrade approach and return to OOTB
- How much time your staff must spend on other things including production support
- From/To Siebel version



Did You Configure Siebel Correctly?

- Were OOTB applets extensively modified or were copies created?
- Were unwanted items inactivated or were they deleted?
- Was scripting minimized?
- Prefixing/suffixing new/copied objects can sometimes help with the upgrade.
- External programs access Siebel via XML or object interfaces only and no direct SQL?



Don't Try This At Work – We Do Siebel Upgrades For A Living

- SEA 7.x -> 8.0 development upgrade over a weekend.
- Siebel UAN Center of Excellence demo system: Two-step SEA 7.5 -> SIA 7.7 in 4 days + 2 weeks part-time fixing.
- Fixed price SEA 7.5 -> 7.8 for \$34K.
 - Dev and QA upgrade and make everything work again.
- Siebel Fins 7.0 -> SIA 7.7 in just 4 months mainly on own with part-time help from us.
 - We have worked on several of 7 -> 7 upgrades that only took about 4 months where the customer did most of the work with help from us when needed.
 - We endorse the model of the customer doing upgrade with our help and guidance.
- Extremely complex Siebel 6 -> 7.7 upgrade in only 4 months.



But You Should Be Able To Do Better Than This

- AT&T Wireless Siebel 6 -> 7.5 upgrade disaster (\$100M in lost revenue).
 - Rushed into production, failed to do load testing and most importantly did not have fallback (should have upgraded copy of production)
- Reimplementations requiring 12+ months.
- Siebel CME 6 -> 7.7 dev upgrade which hit 5 bugs and was barely completed in a full week!
- Production test initial pre-tuning run where upprep ran for $222 + 326 = 548$ hours (23 days)
 - Our previous worst experience was 6 days.
- Many not so complex 6 -> 7 upgrades that took 12+ months and cost over \$1M.
- 6.x upgrades that settle for version 7.7 since they think upgrading to 8.0 is too much extra work.

Two Nearly Identical Upgrades – Two Vastly Different Timelines

Attribute	Upgrade 1	Upgrade 2
Timeline (plan 2 prod)	4 Months	9 Months
Approximate Cost	\$250K	\$750K
Version	6 -> 7.7	6 -> 7.8
Customization	Highly complex, eScript, interfaces, reports, etc.	Highly complex, eScript, interfaces, reports, etc.
Theme	Limited budget and limited time	Upgrade, this is our only chance to fix things, but still save time and \$
Fix existing bugs, return to OOTB and add new features?	No way – are you kidding? Those are change requests for Phase II.	Fixed existing bugs, returned to selected OOTB, added new features

- Both were phenomenally successful but in very different ways.



What Is The Siebel Upgrade?

Different Views of the Same Thing

- An exercise in how well you can read and follow the Siebel Upgrade Guide.
- A set of manual and automated steps that:
 - Upgrades your database to Siebel 8.0.
 - Merges your Tools configuration changes with version 8.0 Siebel to produce a customized version of the Siebel 8.0 application.
- A test to see how well you and your team can overcome challenges you may never have faced before.
- An opportunity to impress or disappoint your end users depending on how well you execute the upgrade project.



Siebel Upgrade Overview – Two Main Things Happen

- Upgrades your existing schema to the latest Siebel schema.
 - In place and mostly additive upgrade.
 - New tables, indexes and columns added.
 - Where needed data moved from old tables to new tables.
- Merges your Siebel Tools customizations with the latest Siebel version.
 - Customized repository merged with prior and current Siebel OOTB repositories to produce new customized repository.
 - Only OOTB objects get three-way merged but all objects including totally custom objects can be changed in the upgrade process.
- Note: Siebel upgrade runs in all environments including dev, test and production.
 - Question: When is it ok not run the Siebel upgrade in certain environments?



Siebel Upgrade Steps – Manual and Automated

- A combination of automated and manual steps.
 - The Siebel 8.0 Upgrade Guide lists 78 steps for the development upgrade.
 - Siebel 7.7 Upgrade Guide lists 144 steps for a 6.x development upgrade
- Normally best procedure is to follow the Upgrade Guide to the letter with just a few exceptions.
 - Two-step upgrade which is not documented requires a few changes.
 - There aren't many but there are a few places where the Upgrade Guide is not always correct in all situations.
- Don't invent steps you think the Upgrade Guide might have missed.



High Level Siebel Upgrade Phases

- Upgrade planning and assessment
- Install new Siebel version and optionally acquire new hardware
- Development upgrade, testing and fixing
- QA upgrade and testing
- Optional upgrade tuning and downtime minimization
- Train users on new system
- Production upgrade and deployment



Dev Upgrade According to the 8.0 Siebel Database Upgrade Guide

- Check SupportWeb
- Upgrade the Servers
- Upgrade Third Party Software
- Upgrade RDBMS
- Pre-Upgrade Tasks for the Database
- Pre-Upgrade Tasks for DB2 / Oracle / SQLServer
- Pre-Upgrade Tasks for Application Data
- Preparing Developer's for the Upgrade
- **Upgrade the Database Schema (upgrep)**
- Prepare for Repository Merge
- **Repository Merge**
- **Upgrade Custom Database Schema (upgphys)**
- Initialize and Extract Developer's Local Databases
- Review the User Interface
- Postmerge Development Tasks
- Upgrade Tasks for File System and Database
- Postupgrade Tasks for Application Configuration
- System Tests
- Prepare for Transition to Production Test (QA)



Automated Siebel Upgrade Processes

Step	Development	Production Test (QA)	Production
Prepare for Production Upgrade		Only runs here	
Upgrade Siebel Database Schema (upgrep)	Yes	Yes	Yes
Tools Merge, Post Merge Utilities, Generate EIM Processing Columns, Resolve Merge Conflicts	Only runs here		
Upgrade Custom Database Schema (upgphys)	Yes	Yes	Yes



Things You Might Not Have Known About The Siebel Upgrade

- Most Siebel upgrades take longer and cost more than they should.
- System performance is not always better with the new version of Siebel (until you work on it).
 - No doubt UI performance is much better with 8.0 than 7.0/7.5.
 - Sometimes new features inadvertently hurt performance. E.g. New M:M intersection table or change to sort specification.
- Removing customization and returning to OOTB Siebel can carry a high price tag.
- Upgrades often include optional items such as adding new features and functionality that probably should be performed as a separate project.
- Upgrades find and fix a fair amount of issues (25%+) that were present in the current production system but not discovered or not reported until the intensive testing performed as part of the upgrade.
- Even using non scripting alternatives can lead to some work on Siebel upgrades.



What Is Your Siebel Philosophy?

■ Siebel Puritan

- OOTB is always better than customized and OOTB should always be the goal regardless of time/cost.
- As new Siebel versions are released customers will be able to remove more and more of their customizations until one day when everyone will be close to OOTB.
- Customers don't really want their customizations – they want OOTB Siebel.

■ Siebel Realist

- Customers need/needed their customizations since there was/is a gap between Siebel OOTB and requirements.
- Customers want to complete the upgrade process without having to spend a ton of time and money.
- Removing customizations and scripting is good but we have to pick and choose where we are going to return to OOTB.



Upgrade or Reimplement?

- Some people may tell you to reimplement instead of upgrade.
- We have yet to see a single case where reimplementing was not a mistake and consider this practice an antipattern.
- Believed to have originated from bad experiences some have had with the Siebel upgrade, probably due to lack of experience.
- Ignores the fact that most customers really do need their customizations and simply can not run Siebel OOTB for all customizations.
- Often customers feel like their original implementation could have been better so they like the idea of being able have a second chance at doing it better than the first time.
- Favored by some system integrators because reimplementing means there will be analysis and design phases which are normally minimized/skipped on upgrade projects.



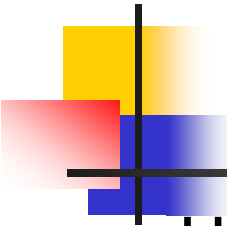
Selectively Going Back To OOTB and New Free Features

- Going back to OOTB can carry a high price tag so be careful when you say you want to go back to OOTB as part of your upgrade. We have to pick and choose wisely when to return to OOTB.
- Actual examples where OOTB features replaced customizations:
 - Replaced eScript Audit trail with Siebel audit trail for about \$10K.
 - Replaced complex eScript assignment manager with Siebel 7.8 Assignment Manager for about \$175K (20% of upgrade budget).
- Compare to features like 8.0 native browser back/forward buttons, screen homepages, automatic saving of file attachments and others that come for free with the new Siebel version.
- During planning when you look for opportunities to return to OOTB don't be surprised when you can't identify too many places where you can actually remove your customizations.
- E.g. what is the cost/benefit of replacing eScript business rules with the new 8.0 Haley rules engine?
- E.g. You added X_ADDR_LINE_2 and now Siebel has ADDR_LINE_2 OOTB. What should you do?




Project Planning: How To Make Your Deadline

- Perform upgrade and get essential functionality to go live accomplished first.
- Put all enhancements on hold until you are sure you have time to fit them in and make sure it is understood that enhancements will only be done if time allows.
- Put opportunities to return to OOTB such as X_ADDR_LINE_2 in the parking lot and only do them if your timeline allows toward the end of the project.
- Put things that have nothing to do with the upgrade (that really should be done anyway) in the same parking lot and only do them if your timeline allows.
 - E.g. During upgrade we notice we don't have try/catch/finally blocks in some eScript and we know we really should have added them when we originally wrote the code.
- Need a project manager overseeing these decisions since left to their own devices developers will "always" do the last two items even if it means they might jeopardize the project timeline.



Achieve Balance – Refactored Upgrade

- Use Siebel database and tools upgrade.
- Selectively replace customizations with OOTB where cost/benefit warrants.
- Consider refactoring other parts of configuration with new and better configuration where cost/benefit warrants and new features allow for things like code removal.
 - E.g. Replace certain eScript code with workflow processes now that wfp run so much faster than before.
 - Could always do/continue refactoring as part of Phase II after upgrade.



Who Is Advising You About Your Upgrade?

- Is the person / organization advising you:
 - Willing to do the work for you or do they just give advice?
 - Willing to do the work for a fixed price?
- Can they offer you references for other upgrades they have done?
- Do their upgrades stand out as somehow above average or are they the more typical long duration and expensive Siebel upgrade projects?
- Will the person giving you advice benefit by your project taking longer and requiring more people?
- Does the person advising you get compensated according to how many consultants they place on projects?



Upgrade Planning

- Minimum of four weeks of planning recommended.
- Don't just assess what you have. Need to determine actual work required to move to new version.
- Ideally do the real or trial upgrade early in the planning process.
 - Provides JIT hands-on upgrade training.
 - Identifies exactly what will happen and what will break after the real upgrade runs.
 - If real dev upgrade done during planning that much less time required in next phase.
- Want to produce these deliverables:
 - Identify all work tasks required for upgrade project.
 - Task durations and dependencies.
 - Staffing plan for resource types and counts.



Development Upgrade

- Potentially very large on 6.x upgrades.
- For 7.x upgrades normally can be measured in weeks.
- Tasks vary depending on a number of factors including current Siebel version, amounts and type of Tools configuration, specific modules, etc.
- Certain parts of your Siebel configuration will “break” after the upgrade and we need to determine what these items are and how we are going to fix them.
- Need to decide which new features to take advantage of.
- Determine which parts of implementation should return to OOTB and/or be refactored.



Development Upgrade Expectations

- Application probably won't launch after upgrade due to one or more configuration errors which will have to be fixed.
- Modified OOTB applets will be mangled.
- Screen/view layout will require touchups.
- BusComp links and joins will require fixes.
- SQL errors will be seen until buscomps/tables are straightened out.
- Scripting will require changes even on Siebel 7 -> 8.0 upgrades.
- EIM tables may have new required columns and old IF tables don't exist anymore.
- Integration objects might have different XML schemas until they are touched up.
- Actuate reports will need to be recompiled but custom Actuate VB can require a lot more work.
- Most existing customers don't like 7.7-8.0 removal of page tabs from main screen list views (aggregate view require drilldowns to see tabs).



QA Testing Time

- Largest component on 7.x -> 8.0 upgrades.
- Duration frequently underestimated.
 - Don't use last point release as a basis. Instead use testing time from last upgrade or initial implementation.
- Plan to test everything. Siebel UI, interfaces, reports, etc.
- Be sure to add time for performance and scalability testing of Siebel application and infrastructure.
 - Expect to add time to fix performance issues since better performance in all places won't happen – some areas will be slower until tuned/fixed.
- For large databases upgrade tuning can take a very long time when very limited downtime must be achieved.



Production Upgrade and Rollout

- Allow time for several practice runs before doing the real thing.
- End user training and change management can be a very large task depending on number of users.
- Ideally would like to have some type of phased rollout but in practice this can be difficult and very costly to achieve.
 - Unfortunately “big bang” is the best practice for Siebel upgrades.
 - Better to have a “cushioned big bang” with immediate fallback in place.
- Always leave old Siebel instance and database alone and upgrade a copy of production in order to have fallback. Also allows practice runs of real upgrade on actual hardware. Can use new prod as QA as well until go-live.
 - Weekend upgrade does not allow time to restore databases and application to old version if it was uninstalled.



Other Tasks To Consider

- Implementing new modules like 7.8 Order Management can be a very large project in itself.
- Migration from Siebel 6.x or SEA to SIA requires two steps.
- Pick the right version. 7.8 or 8.0?
- Migrate to new ST eScript engine or stay with old T engine?
- Migrate database to UNICODE?
- Migrate to UTC date / times?



Questions and Answers

Respond at ponderproserve.com

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