TITLE: DIET "PRIDE"

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Since 1971: *"Software for the finest computer - the Mind"*

*"85% of all systems development work is
modifications/improvements."*
- Bryce's Law

INTRODUCTION

In "PRIDE" Special Subject Bulletin No. 27 (June 26, 2005) I described the differences between a robust methodology like "PRIDE" versus methodologies used for Agile/Extreme Programming (A/EP), which is essentially comparing apples with oranges. Whereas "PRIDE" is primarily concerned with major systems development efforts, A/EP is geared towards smaller programming assignments. After writing the article, I received correspondence from people who got the impression that "PRIDE" is inflexible when it comes to smaller assignments. Not true, and it is time I cleared up this misconception.

First, we have long recognized the work load of the typical systems development organization is approximately 85% spent on implementing modifications/improvements to existing systems, 10% on new development, and 5% on systems maintenance (the correction of errors in existing systems).

An important part of the "PRIDE" philosophy is the recognition that if there is anything constant in life, it is change. The day when a system is installed, is the day it begins to undergo change. Such changes are caused by new or revised information requirements (triggered by competition, government regulation, corporate policy, economics, market changes, acquisitions, etc.) end-user accommodations, and the introduction of new technology. Since change is a natural part of life, "PRIDE" recognizes that systems are built by evolution, not revolution. Change is an inherent and natural part of the development process.

The problem thereby becomes where does one begin in the "PRIDE"-Information Systems Engineering Methodology (ISEM) and what phases and activities are necessary to complete the assignment. For new systems development (or to replace a whole system) it will be necessary to execute all of the phases. But for the implementation of changes, certain portions will suffice.

THE STRUCTURE OF "PRIDE"-ISEM

"PRIDE"-ISEM consists of an assembly of nine phases detailing what is to be accomplished and by whom. Each phase consists of a defined set of activities (a total of 41); each activity consists of a series of operations or tasks to be performed. All phases, activities and tasks produce tangible deliverables that can be reviewed and checked for completeness. These deliverables substantiate adherence to the methodology and permits the measurement of progress. Both formal and informal review points are laced throughout the methodology providing for an effective dialog between management, users, and systems developers.

The phases of "PRIDE"-ISEM were not just arbitrarily defined but, instead, based on the "PRIDE" Standard System Structure concept which we have discussed on numerous occasions (based on a product structure). The early phases are used to design the system top-down, and the latter phases are used to test and install the system bottom-up. This "explosion/implosion" development approach is common to the engineering of all products.
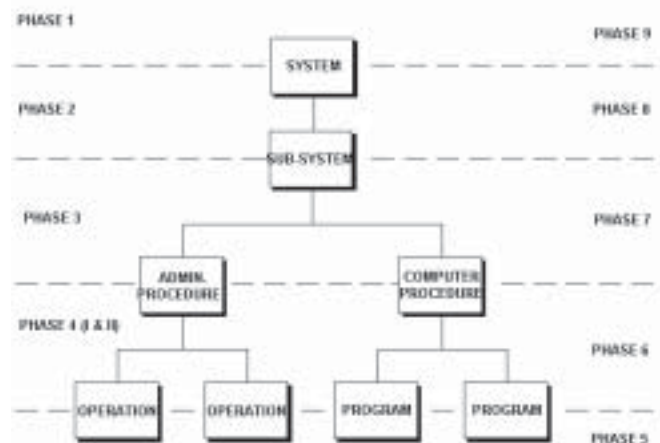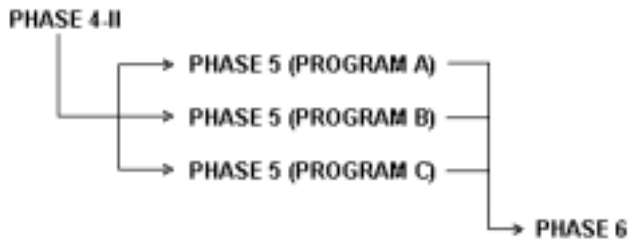
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Further, there is a relationship between phases and the system structure.

ISEM PHASES	2	3	4-II	5	6	7	8
RESOURCES							
System	X						X
Sub-Systems		X				X	
Computer Proc.			X		X		
Program				X			

NOTE: Administrative Procedures are normally tied to the Sub-System key and are implemented under Phase 4-I.

There is an explicit one-to-one relationship between the system resource and the phase. For example, if three sub-systems require modification, then three Phase 3's will be required; if four programs need to be changed, then four Phase 5's will be needed, etc.

This relationship between the "PRIDE"-ISEM Phases and system resources provides a convenient means for determining the project path. For example, let's assume a single computer procedure needs to be modified consisting of three programs (A, B, and C); the project path would be:

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PHASE 4-II
            ┌──→ PHASE 5 (PROGRAM A) ──┐
            ├──→ PHASE 5 (PROGRAM B) ──┤
            └──→ PHASE 5 (PROGRAM C) ──┤
                                       └──→ PHASE 6
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In other words, you only complete those phases and activities needed to implement the change.

It is this methodology/product structure relationship (among other things) that differentiates "PRIDE"-ISEM from other traditional development methodologies. "PRIDE"-ISEM's approach allows parallel development whereby sections can be developed concurrently or in stages based on the availability of human resources.

"SO WHERE DO I BEGIN?"

That's easy: Phase 1, Activity A "Preliminary Project Scope." This is where the assignment is specified as precisely as possible. The scope establishes the project boundaries which will determine estimates, schedules and work effort. Projects tend to lose direction without clear boundaries and tend to wander into areas unintentionally. This will result in performing more work (or less) than what is necessary to satisfy project objectives.

If the request is for new development, the remaining activities of Phase 1 will then be required. But if the request pertains to one or more changes to an existing system, then the Project Manager should study the impact of the change on the existing system before defining a project plan.

IMPACT ANALYSIS

In order to accurately evaluate change, an "Impact Analysis" is performed to study the relationships between information resources and appraise what resources need to be modified. Some examples:

• If the length of a data element is to be modified, an analysis must be performed to identify the panels, maps, records, files, inputs, outputs, modules, programs, etc. affected.

• If a single report or screen needs to be changed, an analysis is required to identify the programs and procedures affected.

• If a software module is revised, the related programs and data structures must be identified.

The implementation of "impact analysis" requires an IRM Repository (aka Data Dictionary, Encyclopedia, Meta Data, etc.) as has been previously discussed; see:

Establishing an IRM Repository
http://www.phmainstreet.com/mba/pride/spir.htm

Basically, an IRM Repository is used to catalog and cross-reference information resources, e.g., data, systems, and business components. Such a tool is extremely useful for studying the impact one component has on others. From the "impact analysis" Project Management determines all of the pertinent phases and activities required to implement the changes (as mentioned above). Some other notes:

• If changes affect Information Requirements, certain activities with Phase 1 should be performed, such as Activities C, D and E.

• All projects should conclude with a Phase 9 "ISEM Evaluation" review.

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- If an input, output or sub-system is involved, then in all likelihood, portions of Phase 2 will be required, e.g., Activity C "Illustrative OD/ID Examples".

- Consideration should be given to implementing "PRIDE"-Data Base Engineering Methodology (DBEM) phases and activities, particularly if new data requirements are being implemented or physical files are being modified.

The selected "PRIDE" phases and activities represent the project plan, which can then be estimated and scheduled. Those developers assigned to the project should participate in this endeavor.

CONCLUSION

This approach to tackling smaller projects was nicknamed "Diet PRIDE" years ago by our customers (nothing to do with Adkins or South Beach). It is based on the recognition that the "PRIDE" phases and activities to be executed in a project are proportional to those needed to implement the requested changes. In this respect, it is very much in tune with Agile/Extreme Programming by allowing developers to worry less about the mechanics of a methodology and more on performing the needed work.

Bottom-line: "PRIDE" is not a rigid and inflexible approach to development but, rather, embraces change. The only glitch is that it requires common sense, and there's only one thing wrong with common sense in the I.T. industry; its not very common.

END

"PRIDE" Special Subject Bulletins can be found at:

> http://www.phmainstreet.com/mba/mbass.htm

They are also available through the "PRIDE Methodologies for IRM Discussion Group" at:

> http://groups.yahoo.com/group/mbapride/

You are welcome to join this group if you are so inclined.

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http://www.phmainstreet.com/mba/pride/pride.htm