

You CAN always get what you want: And here's how!

PINES is no stranger to challenges both in terms of a dares or difficulties. Since PINES made the decision to create a new model for library cooperation and launched software development to support it, the consortium has seen many stops, starts and redirects along the way.

Elizabeth McKinney, PINES Program Director

J Elaine Hardy, PINES and Collaborative Projects Manager



The PINES Case Study

PINES Mission Statement

The purpose of the Georgia Library Public Information Network for Electronic Services (PINES) is to provide the State's citizens with free and reliable access to Georgia public library collections and information through an Internet-based multi-system union catalog.

But what does that really mean for us?

The PINES Case Study

- 283 service locations in 142 counties
- PINES serves patrons in all 159 counties
- More than 2.4 million PINES library cards in use
- More than 1 of 5 Georgians (24%) have a PINES card
- PINES serves patrons in all 159 Georgia counties
- 10.6 million items (books, tapes, CDs, videos)
- 15 million circulations in FY 2015
- Total IntraPINES Loans - 632,540
- FY15 Total New Library Cards Issued - 157,241

The PINES Case Study

- First statewide library card launched in 1999
- Began development of Evergreen in 2004
 - Proprietary vendor software would not allow for flexibility or growth
 - Five State of Georgia employees coordinated development, four of which would eventually spin off their own company called Equinox
 - Volunteer developers from around the world, including local volunteers from Emory University and Georgia Tech
- Went live with Evergreen in September 2006

Take Advantage of the Disadvantages

If you total up all the wars over the past 200 years that occurred between perceived very strong and perceived weak countries, how often do you think the stronger side wins? 100%

What happens in wars between the strong and the weak when the weak uses unconventional or guerilla tactics?

From David and Goliath: Underdogs, Misfits and the Art of Battling Giants; Malcolm Gladwell

The Innovator/Revolutionary

Psychologists measure personality using the Five Factor Model or “Big Five” inventory.

- Neuroticism
(sensitive/nervous versus secure/confident)
- Extraversion
(energetic/gregarious versus solitary/reserved)
- Openness
(inventive/curious versus consistent/cautious)
- Conscientiousness
(orderly/industrious versus easygoing/careless)
- Agreeableness
(cooperative/empathic versus self-interested/antagonistic)

Innovators and Revolutionaries have a very particular mix of these traits with the last three being openness , conscientious and the crucial element is that innovators need to be ***disagreeable***.

An Innovator/Revolutionary must be willing to shake the norms and take risks – to do things others might disapprove of.

Ask Questions, Lots of Them, Always Ask. Ask and be specific. Ask again.

- You can work within the state government framework and get things done.
- RFI, RFQ, RFP and how to leverage them
- Writing software development requirements.
- Never accept “no” as the final answer. Ask again. The “no” may no longer be a “no”.

Persistence. Try, Try, and Then Try Again

- Is this really working for you?
 - Is it worth trying again?
 - How can we change our approach this time?
 - Making the decision to change directions.
-
- Bucket Project case study
 - Courier case study
 - Acquisitions case study

Be prepared for your wants to be fulfilled...or not.

- Sometimes you get what you want on the first try.
- Failure or rejection is an option
- Remove as much fear as you can
- Be willing to step back and look at what is/is not working
- Be willing to change
- Minimize regret
- Learn by doing. The top-ranked method for acquiring new skills is through experience.
- Teach each other
- Ban together

Be prepared for your wants to be fulfilled...or not.

Our list of failures

- Phase II PINES
- LONGOVERDUE
- Staffing
- PINES Upgrades – 2007-2010
 - Bucket Project
- Courier-Summer of 2008

Don't Stop Thinking About Tomorrow

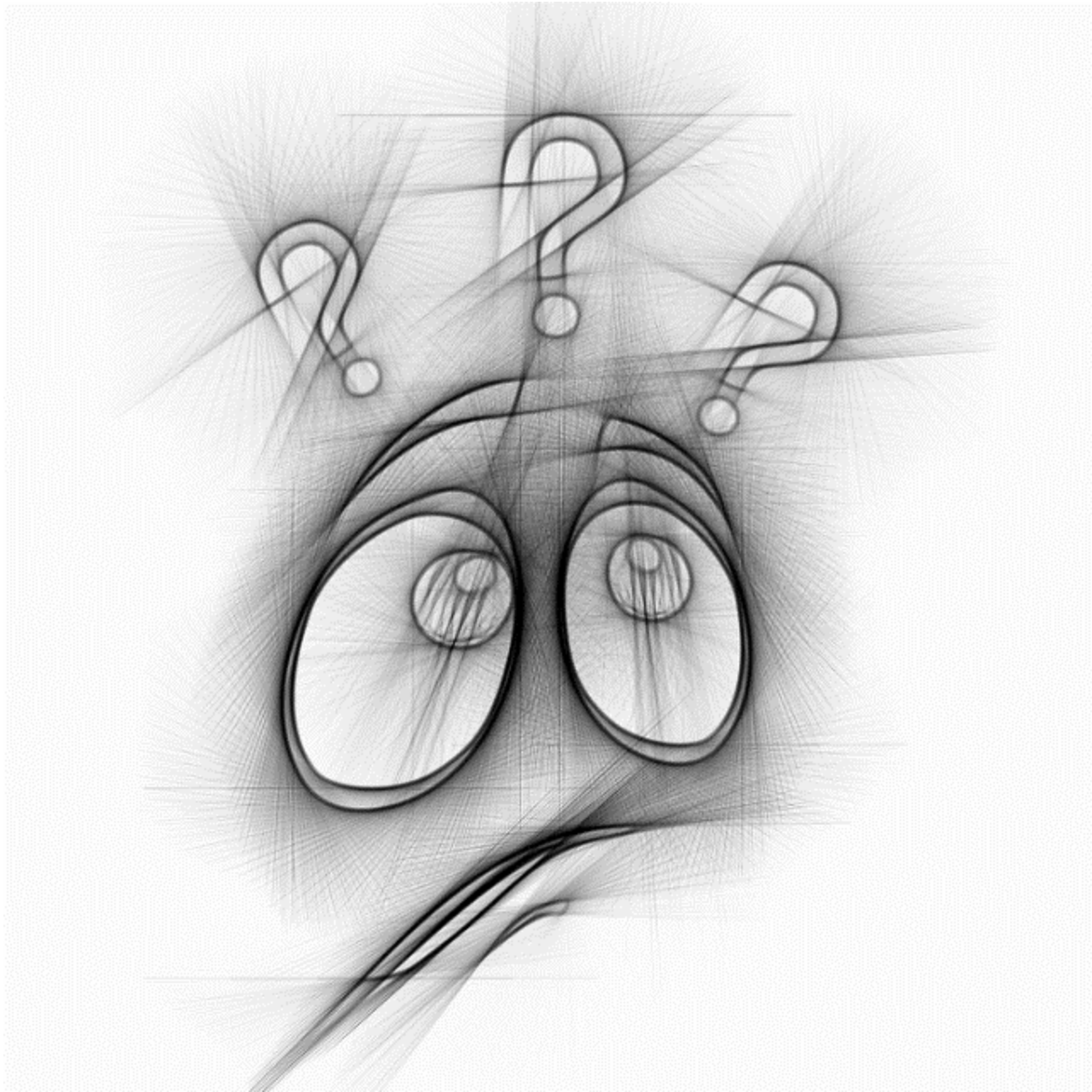
Setting and achieving a goal isn't the finish line for people who are successful. Achieving one goal is simply a launching pad for the next huge goal.

Writing Requirements for Software Development



J. Elaine Hardy

PINES and Collaborative Projects Manager
Georgia Public Library Service



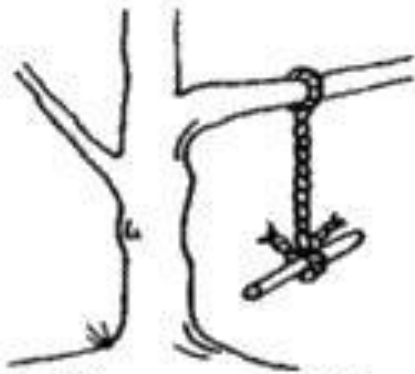
Requirements gathering



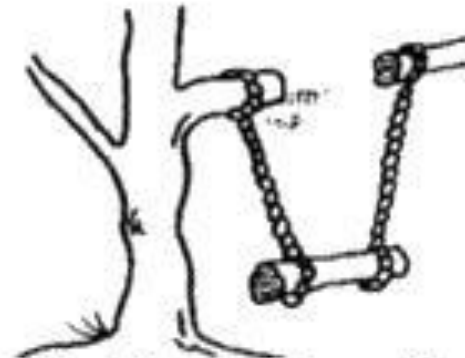
Can Birds
Fly?

Keep in mind

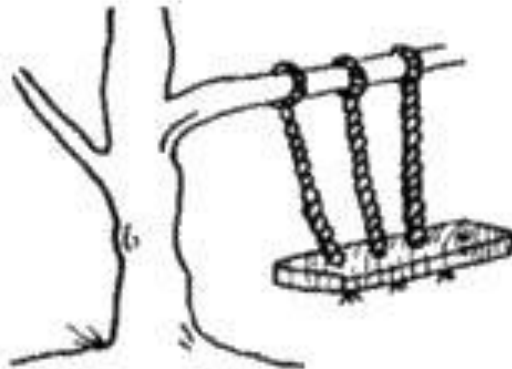
- Perfection is not possible – you won't be able to gather everything; your goal is to minimize the lost and maximize the found.
- Ask “why, what, how, who” as often as possible, of as many stake holders as possible, of as many points in the software as possible.
- You aren't designing the software. You're delineating what the software should accomplish or what the results are.



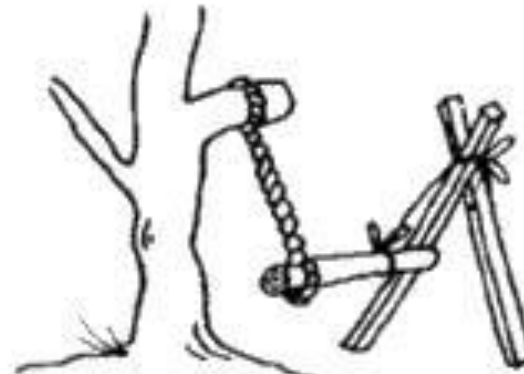
What the user asked for



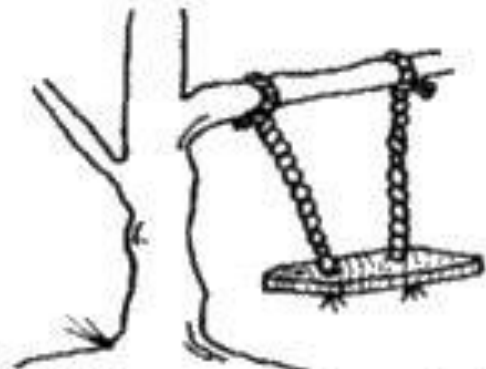
How the analyst saw it



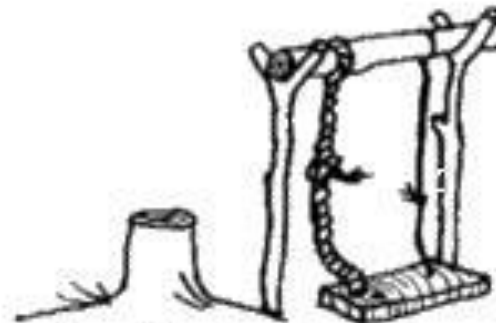
How the system was designed



As the programmer wrote it



What the user really wanted



How it actually works

Good Requirements

- Meet specific needs
- Are clear
- Are understandable
- Are unambiguous
- Are attainable
- Are verifiable
- Use good grammar

Benefits of good written requirements:

- Establish the basis for agreement between the users and the developers on what the software is to do
- Reduce the development work
- Provide a foundation for estimating costs and schedules
- Provide a baseline for validation and verification

Requirements should be

- Organized
- Structured
- Numbered
- Atomic – of or forming a single irreducible unit or component (one at a time)

Example Requirements

Req ID: GSR-02 **Priority: 1**
Name: Item price
Description: System will use price in item attributes. If no price is in item attributes, system will use default price in library settings for the owning library.
Related Reqs: BILL-01; BILL-05

Req ID: GSR-03 **Priority: 1**
Name: Item Status
Description: Item is set by Evergreen ILS to **Longoverdue** if 181 days overdue.
Related Reqs:

Req ID: GSR-04 **Priority: 1**
Name: Hold Status
Description: Item is set to **Not Holdable**
Related Reqs: GSR-03; GSR-05

Use Case ID and Name:	USE-2 Item damaged but repairable
Users:	Library circulation staff, patrons
Description:	Item is returned with repairable damage such as torn Mylar jacket, torn pages, or missing one CD.
Trigger:	Patron returns damaged item, either in book drop or at desk
Preconditions:	<ol style="list-style-type: none"> 1. Undamaged item checked out to patron. 2. Patron returns damaged item. 3. Item still checked out to patron.
Post conditions:	<ol style="list-style-type: none"> 1. Circulation transaction is closed for item. 2. Item is marked damaged. 3. Patron is billed for damage.
Normal Flow:	<ol style="list-style-type: none"> 1. Patron returns item damaged in their care. 2. Library circulation staff accesses patron record. 3. Under Items Out, accesses dropdown menu: Actions for Selected Items; chooses Mark Damaged (by Patron). 4. Dialog box opens with options to No Charge, Charge Specific Fee, or Charge Full Price. <p>...</p>
Alternative Flows:	<p>Alternative Flow 1: Staff login does not have appropriate permissions to bill.</p> <ol style="list-style-type: none"> 1. At Normal flow #5, dialog box opens indicating staff does not have permission to bill and requests login with billing permissions or cancel. 2. Staff provides login with billing permissions. 3. Normal flow resumes at #5. <p>...</p>
Exceptions:	<p>Recoverable exception 1: Staff chooses No Charge in error can cancel rather than click OK with no actions by system; can choose to Mark Damaged (By Patron) again or check in normally.</p> <p>...</p>
Assumptions:	<ol style="list-style-type: none"> 1. Library Circulation Staff has appropriate permissions for billing. 2. Item checked out to patron. 3. Damaged status is invisible in OPAC. 4. Damaged status is not holdable.

Software Requirements Specifications

Parts

- Introduction
 - Purpose and Perspective
 - Product Scope and Features
 - Intended Audience
 - User Classes and Characteristics
 - Operating Environment
 - Design and Implementation Constraints
 - Assumptions and Dependencies

Software Requirements Specifications

Parts:

User Classes and Characteristics

Patron		A patron is a customer of PINES, either possessing a library card or not, either on site of a community library or not, using either print materials, media materials, or electronic resources
Library Staff	Circulation	Library Circulation Staff include librarians, library technicians, and others who provide basic library services such as checking out library materials, billing patrons, checking in returned materials, accepting payments, and refunding monies
Library Staff	Cataloging	Library Cataloging Staff include librarians, library technicians, and others who catalog library material using local and national standards. They add, edit and delete bibliographic and item records to the PINES database.
Local Administrators		Local Administrators include library directors, branch managers, department managers and others engaged in the management and operation of library systems and units.
PINES Staff		Members of the PINES staff at GPLS who facilitate and assist PINES libraries in design and implementation of the Evergreen ILS

Software Requirements Specifications

Parts, cont.

Operating Environment

OE-1:	Evergreen for PINES supports the needs of a large, multiple-branch library consortium. Specifically, the system must support a library consortium with more than 50 separate systems at 285 service outlets with potential for further growth at all levels, 20 million circulations, purchasing and processing over 500,000 items per year.
OE-2:	The Evergreen ILS operates on a Linux or Solaris server.

Design and Implementation Constraints

None of the requirements in this document are intended to limit design options except for those constraints delineated below. Rather, these requirements are intended to specify and identify design characteristics desired by the Georgia Public Library Service for marking items discard/weed.

CO-1:	User rights and privileges will be controlled through security groups and/or “roles” that allow access control for individuals, workgroups, and arbitrary Staff groups.
CO-2:	User rights and privileges are assigned by Local Administrators or PINES staff.
CO-3:	Evergreen is licensed under GNU General Public License (GNU GPL), version 2.0 or later.

Software Requirements Specifications

Parts, cont.

Assumptions and Dependencies

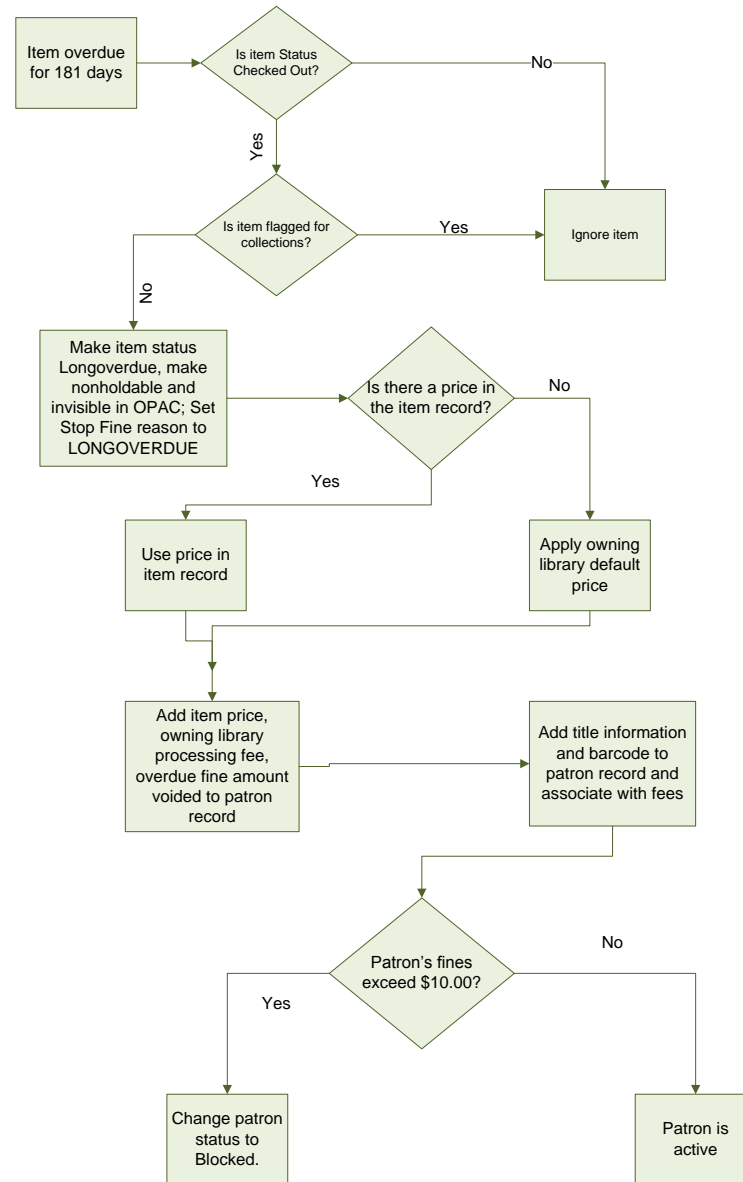
AS-1	The standard for input of bibliographic data is currently USMARC21. The Evergreen ILS stores USMARC21 as MARCXML.
DE-1:	The Evergreen ILS is an enterprise-level Library Automation System.

Software Requirements Specifications

Parts, cont.

- System Functional Requirements
- System Nonfunctional Requirements
 - Usability
 - Understandability
 - Promptness
 - Internationalization and Localization
 - Response Time
 - Scalability
 - Efficiency
 - Operational and Environmental Requirements: Compatibility
 - Security Requirements: Access
- Use Cases
- Workflow diagrams

Workflow diagrams



Longoverdue Basic Workflow



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