A brief introduction to:

User Stories

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About Craig D. Wilson

- IT Management Consultant
- 10 years of service as an independent consultant preceded by 10+ years of senior and executive management experience in several Fortune 500 companies
- Graduate degree in Management Science, additional post-graduate studies at UCLA's Anderson School, Project Management Professional (PMP), Certified Scrum Master (CSM)
- Specializing in program / large project management, project turn-around, and team and organizational development

Why Talk About User Stories?

- Popular approach for identifying and managing requirements
- Supports agile methodologies and project approaches
- One of many techniques available for capturing, managing, and analyzing requirements

Definition - General

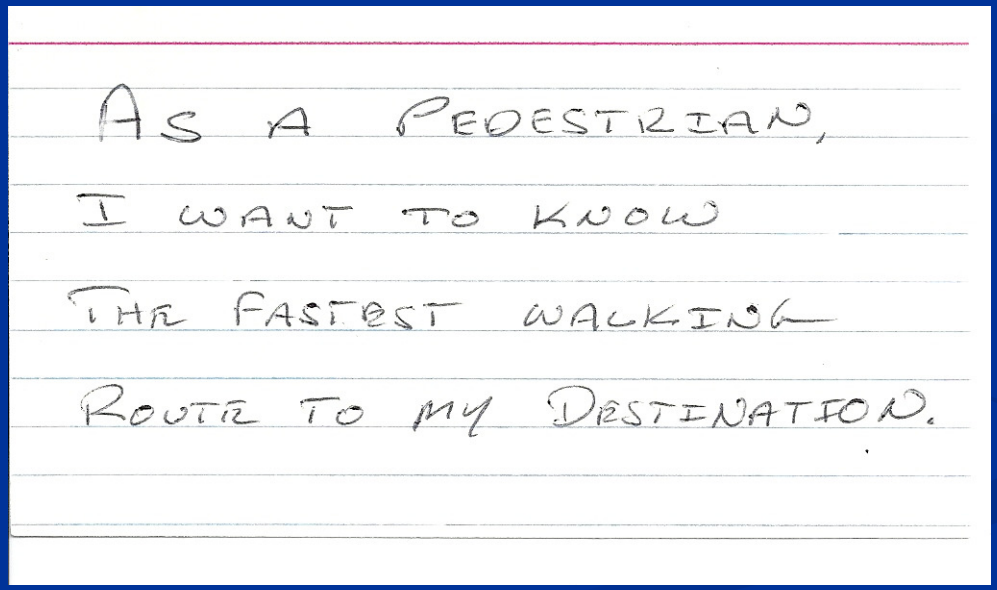
- A way to define a system requirement in terms that are easily understood by a wide range of stakeholders
- Easier for many people to evaluate than the more traditional IEEE software requirements specification statement "the system shall …"

Definition - Specific

- A short statement identifying an objective or goal for a specific user role
- Usually stated in the format:
  - As a <*type of user*>, I want <*a goal*> in order to <*a reason*>
- Example:
  - As a *renter* I want *a list of apartments* in order *to see what is available*

Conceptual Format

- Can be placed on a 3x5 card



Conditions of Satisfaction

- Add a few brief statements on how you will test
- Verify that
  - A pedestrian can walk the route (e.g., it doesn't have you walking in a river)
  - The route is calculated and displayed within 3 minutes
  - The start point and end point are placed on a single-screen map view

Conditions of Satisfaction

- Are at the level of the User Story role
  - Acceptance conditions for Product Owner
  - Help to clarify the User Story goal
- More detailed tests will need to be defined and executed, for example:
  - Unit tests
  - Integration tests
  - System tests

User Story Purpose

- Used to scope and manage backlog of user requirements
  - Easier and faster to capture than detailed requirements
- A placeholder for a discussion about a requirement
  - By itself, a User Story lacks the necessary depth of information for many down-stream consumers

User Story vs. Requirement

- A User Story is to a Requirement what a Product Brochure is to a User Guide.
- A Product Brochure tells you what you can do, a User Guide tells you how to do it.

User Stories vs. Use Cases

- Brief statement
- Single path
- Single role
- Easy(er) to create
- Placeholder for further discussions
- Multiple levels of abstraction (more on this later)

- Thorough description of a user goal
- Multiple paths (alternate & exception flows)
- May have secondary role
- More effort to develop
- Requires deep discussion
- Single level of abstraction

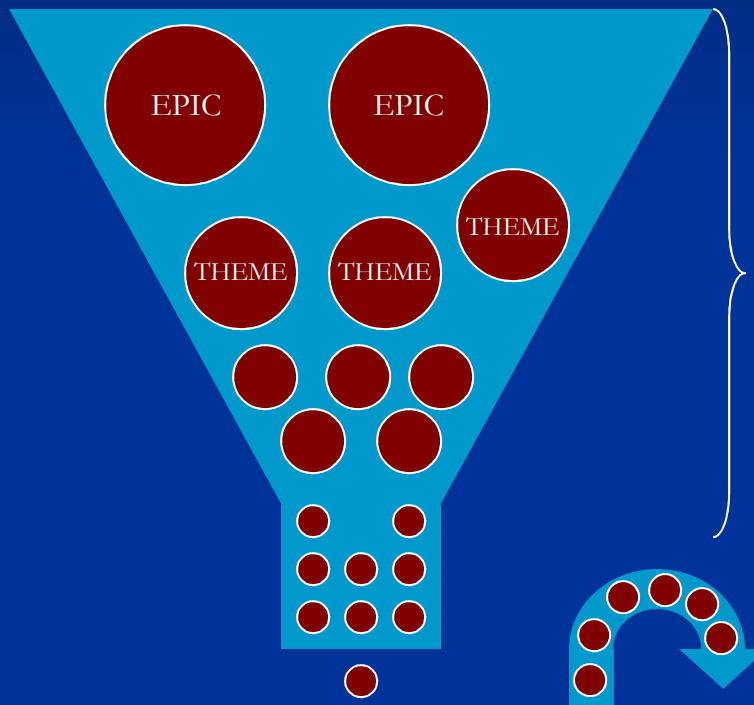
Levels of Abstraction

- Initial project scoping at highest level of abstraction
  - Often referred to as an "epic"
  - Example: As a salesperson I want to manage my contacts so that I can track my relationships
- Next levels at related sub-categories
  - Referred to as "themes"
  - Example: As a salesperson I want to exchange e-mail with my clients so that I can communicate with them

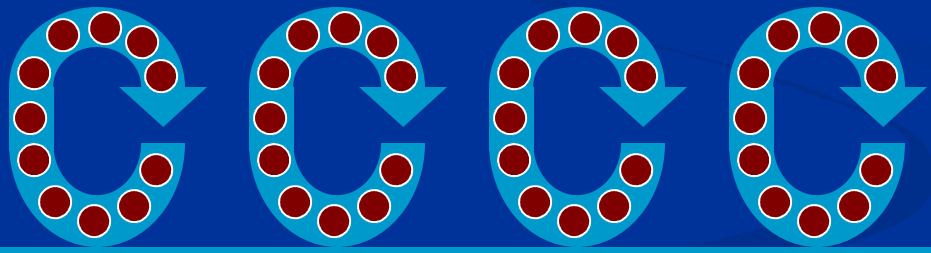
Single User Story

- A simple goal that would be achievable in less than a single development iteration
  - Example: As a salesperson I want to select a specific e-mail addressee from a list of all my contacts.
- But don't go to too low a level
  - Example: As a salesperson I want to enter a zip code in a customer's address entry

User Story Breakdown



Abstraction breakdown occurs over time as backlog is groomed for the next iteration



RELEASE

Sizing & Decomposition

- "Down sizing" can be challenging
- Some techniques:
  - Split along operations
    - As an xyz I can create, I can update, I can delete
  - Split along data boundaries
    - As an xyz I can add or edit text, I can add video
- Don't split by layers
  - UI, middle-tier, database

Decomposition Example

- As a salesperson I want to select a specific e-mail addressee from a list of all my contacts.
  - Select by last name
  - Select by company name
  - Select by last contact date
  - From a list of contacts within a certain group
  - From a list of contacts within a specific zip code

User Story Consumption

- User Story takes you to the "front door" of the development iteration
- However……

  It lacks the detail necessary for a development team to construct a solution

Story Discovery

- Start with project charter or statement
  - Should be able to identify primary Epics and, possibly, Themes
  - Feasibility study, if undertaken, should add more
- Begin development of work breakdown structure
- Hold "story discovery" brainstorming sessions
  - Optimally with full team
  - Realistically may initially only include Product Owner or key stakeholders + analysts
- Develop preliminary backlog of User Stories for Releases and Iterations

Roles

- The people (or systems) which will receive the benefit of the story
- May help to identify stories
  - Once you know the role of a person, it can lead to discussions about what that person may want to accomplish
  - Ask "who are the customers (role) for the service (epic or theme) and what might they want?"
- Helps scope the solution

Roles - Example

- As a student I want to register for classes
  - As a new student
  - As a returning student
  - As an international student
- As a user I want to.. (too vague)
- As Sam I want to.. (too specific)

Drill-down Discussion

- User Story is a placeholder for a discussion
- Discussion takes place with full team
  - Use Case structure can help to guide discussion
  - Use object oriented analysis and design techniques to model solution

Backlog Grooming

- Preparation for upcoming iterations is an on-going process
- The next 2-3 iterations should be well scoped with a good idea of which stories are likely to be included
- Background research can begin for these stories
  - So that detailed discussion can occur during the iteration
- Rule of thumb: 10% -15% of an iteration should be spent preparing for future iterations

Tracking

Epic – online services

- Theme – online shopper
  - Role – as a returning online shopper
    - I want to……
    - I want to……
    - I want to……
  - Role – as a new online shopper
    - I want to……
    - I want to……

Non-functional Requirements

- User stories may be used:
  - As a user I want on-line access to 7 years of data
  - As a user I want screen response times of < 2 sec for 90% of queries
  - As a CTO I want portability to the Apple, Android, and Windows mobile operating systems so that we can serve 90% of the cell phone market

  Personal opinion:
  I think this is a little "forced" and probably unnecessary for most non-functional requirements

Estimating

- Use Story Points for estimating individual User Stories

  For more information on this topic:

  - Introduction to Scrum at www.matincor.com
  - Planning Poker at www.planningpoker.com
- Estimating Epics and Themes is more difficult but can use same technique

Challenges

- Can be difficult to manage without tools
  - Projects were commonly undertaken with dozens of Use Cases
  - Projects may use scores or even hundreds of User Stories
- Using 3x5 cards may hinder traceability
  - We still have Sarbanes-Oxley considerations for public companies
- Multiple re-visits to same code
  - May benefit re-factoring
  - May introduce problems

Round-Table Discussion

- What has been your experience with User Stories?
- What worked well? What didn't?
- If you haven't used User Stories, what are your concerns? What risks do you see?

Tool Research

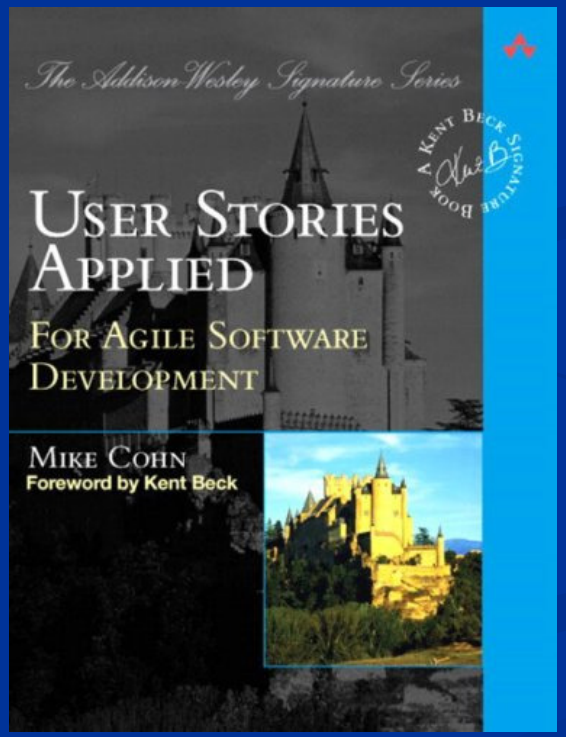
- Many vendors and products. One good example is:

Rally Software (www.rallydev.com)

View the on-line demo

Further Reading

- Mike Cohn, Mountain Goat Software
  - www.mountaingoatsoftware.com



For More Info on Craig D. Wilson

- Visit Matincor, Inc. website:

  www.matincor.com

- On LinkedIn:

  http://www.linkedin.com/in/matincor