

Planning for non-functional requirements in Agile Projects

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Paul Dyson

Please take a badge according to your experience in planning Agile projects:

White: I have never participated in a planning game

Green: I have participated in a few planning games

Blue: I have led a planning game

Red: I have led a few planning games

The logo for Spa 2007, featuring the word "Spa" in a blue, stylized font above the year "2007" in a similar blue font.

Why are we here?

- Objective: “Improve estimation, prioritization and scheduling of the implementation of non-functional requirements in agile projects.”
- Explore two different techniques for planning NFRs that we have successfully used
- 'Mine' some of the experience of the participants



How are we going to do this?

- Run a role-play of the planning of an agile project
 - Split into two halves, each using a different technique for capturing and prioritizing NFRs
 - Run a small number of compressed planning games, Johan and Paul to act as customers
 - Using a real project as an example
- Combine to compare our experiences of these (and other techniques)
- Capture learning points to share after and outside the conference



What we mean by 'non-functional requirements'

Security

Accessibility

Usability

Performance

Manageability

Robustness

Reliability

Maintainability

Portability

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Technique #1: Dreams and Nightmares

- **Dreams = what you want your system to do**
 - User stories
 - Have a **business value**
- **Nightmares = what you definitely don't want your system to do**
 - 'Failure' stories
 - Have a **business cost**
- **Value of implementing dreams must be weighed against cost of not implementing against nightmares**

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dreams

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nightmares

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3 Scattered "Fruit Smoothie" Blenders in any position triggers the Smoothie Bonus



WIN	PAID	CREDITS	BET
		75	7

Paytable))) On

The user presses the start button and the reels start spinning. If a payline shows a winning combination, credit is incremented according to the pay table.



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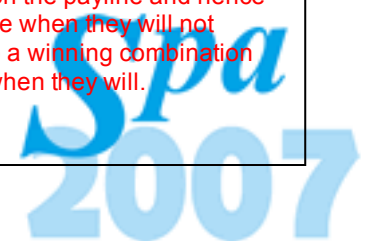
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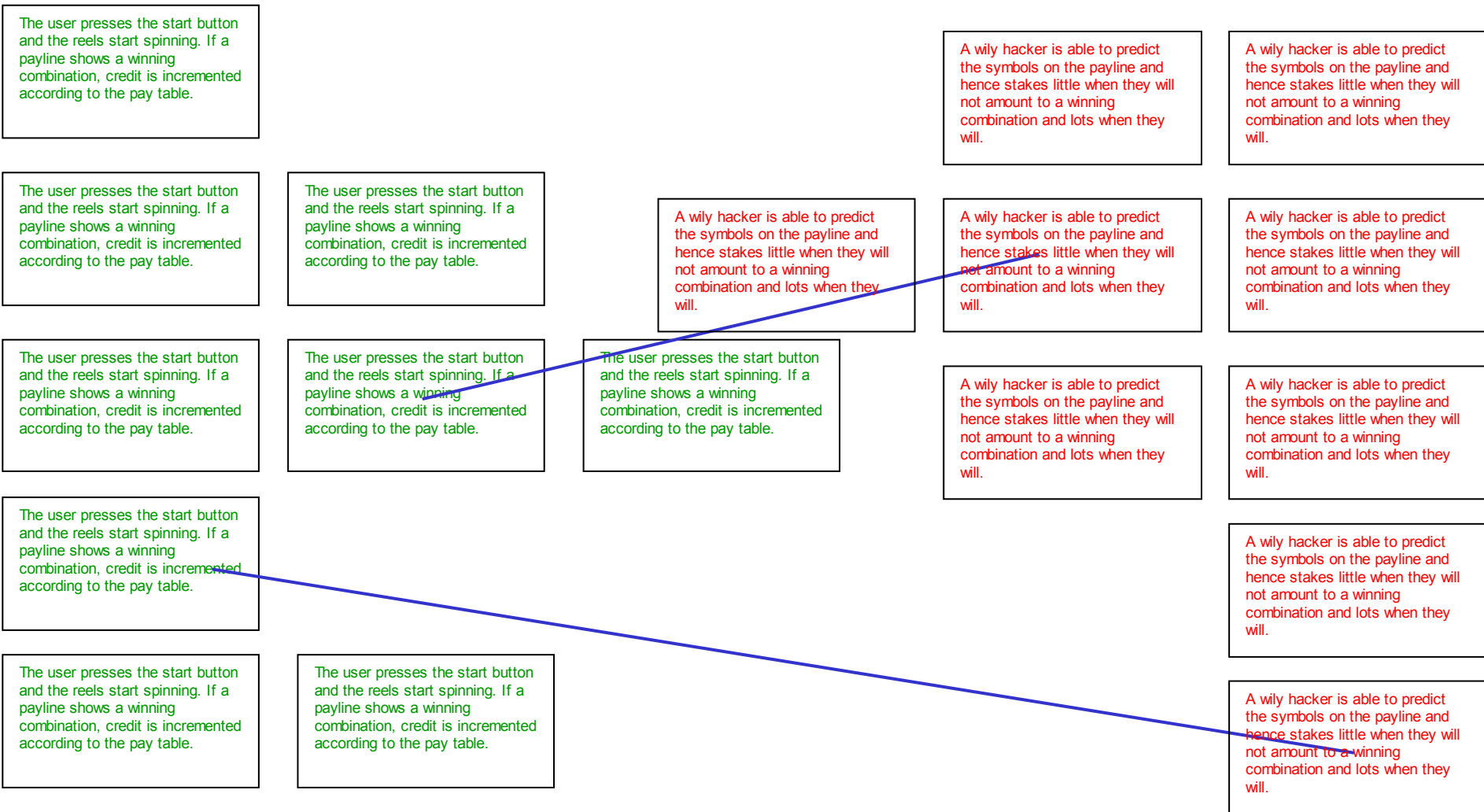
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$$\frac{\sum \text{value implemented user story} - \sum \text{cost nightmare scenario}}{\text{total value}}$$

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iteration effort

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$$\frac{\sum \text{effort to implement user story} + \sum \text{effort to avoid nightmare}}{\text{total effort}}$$

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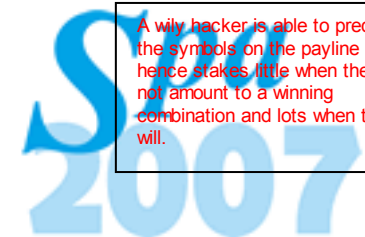
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optimize value for a fixed effort
budget

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Technique #2: Everything is a story

- “There is no non-functional requirement that cannot be expressed as a user story”

Ron Jeffries (maybe...)

- User stories must contain any non-functional requirements related

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Example

Story

The user presses the start button and the reels start spinning. If a payline shows a winning combination, credit is incremented according to the pay table. The symbols displayed must be totally random, with each new payline being completely unrelated to the previous payline(s).



Case Study – Online Bank

- User are bank's account holders
- Users can
 - Register
 - Create account
 - Review account balances
 - Deposit money
 - Transfer money between accounts
 - Pay bill
 - Pay with debit card/withdraw money



Step one: form groups

- You should all have a badge with a colour on it:
 - White: I have never participated in a planning game
 - Green: I have participated in a few planning games
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 - Red: I have led a few planning games
- Please stand in the corner of the room according to the colour of your badge
- Now we form the groups ...



Step two: review case study

- Please review and discuss the case study document in your groups



Step three: the role-play

- Conduct a planning game with Paul and Johan as customers
- 35 minutes per iteration for 2 iterations
- Break in the middle

