

Data Analysis of Experimentation by Contrast Hypothesis



Español



Entries

- Experimentation Implementation Document
 - ◆ Can it be used configuration management?: **Yes**
- Data Collection Document (tracking sheets)
 - ◆ Can it be used configuration management?: **Yes**



Exit

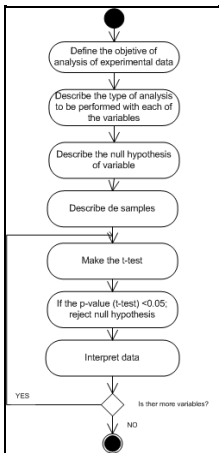
- Analysis of Experiment Document
 - ◆ Can it be used configuration management?: **Yes**



Solution



Process



Development time

- ◆ To acquire the necessary knowledge to develop the software product: 10 days
- ◆ To create the Product Pattern : 5 hours
- ◆ To apply the Product Pattern: Depends on the experiment features.



Explanation video

- ◆ Not applicable.



Related Patterns

- Data Analysis Between Two Variables Using Correlation Technique
- Execution of Experimentation
- Experimentation Planning



Quality Controllers

- None



Templates

- None



Examples



Example by Contrast Hypothesis



Support Tools

- Word processor ([Microsoft Word](#), [Apple Pages](#), [OpenOffice Writer](#), [Google Docs](#))
- [Minitab](#) [Windows]. Minitab Inc.
- [SPSS](#) [Windows, Mac, Linux]. IBM
- [R](#) (An Open Project for Statistical Computing). [Windows, Mac, Linux].



Initial Context

It has been performed an experiment with quantitative variables and independent samples, and it desired to analyze the data obtained using the hypothesis contrast



Result Context

A document with the analysis of the data of the experimentation of a project is obtained.



Problem

It requires a document it which it summarize the analysis of the data obtained from the execution of an experiment using the hypothesis contrast.



Restrictions (*Forces*)

- **Type of Organization:** Research Centers, Universities, SMEs, Large Companies.
- **Features Experiment:**
 - ◆ Type variables: Quantitative
 - ◆ Procedure: Contrast hypothesis
 - ◆ Sample Type: Independent
 - ◆ Sample Size: Small (around 20 or 30 elements)



Roles

- Project Manager
- Investigador
- Student



Lessons Learned

- No lessons learned at this time.



Capability Level

- Not applicable.



Basic Knowledge and Skills



Knowledge

- Statistics notions .
- Probability and data analysis notions.




Abilities

- Capacity of abstraction.
- Capacity of Analysis.



Information Resources

- Jedlitschka, A., Pfahl, D..(2005).  [Reporting Experiments in Software Engineering](#). ISERN-REPORT-06-01. Fraunhofer Institute for Experimental Software Engineering.
 - Jedlitschka, A., Pfahl, D. (2005) [Reporting guidelines for controlled experiments in software engineering](#), isese, pp.10 pp. 2005 International Symposium on Empirical Software Engineering.
 - Juristo, N., Moreno, M.A. (2001). [[Basics of Software Engineering Experimentation](#)]. Springer.
 - Raposo, F. Experimentation in Software Engineering: *An Introduction* [<http://www.rise.com.br>]
 - Wohlin, C., Runeson, P., Höst, M., Ohlsson, M.C., Regnell, B., Wesslén, A. (2000). [[Experimentation in Software Engineering: An Introduction](#)],Springer
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