

Prof. Dr. Frank J. Furrer:

Hauptseminar Summer Term 2017:

**From *ALGORITHMIC* Computing to
AUTONOMIC Computing**



Seminar Day 1 - June 14, 2017

Content:

1. Introduction (F.J. Furrer)
2. Presentations and Feedback (all)
3. Final Words (F.J. Furrer)

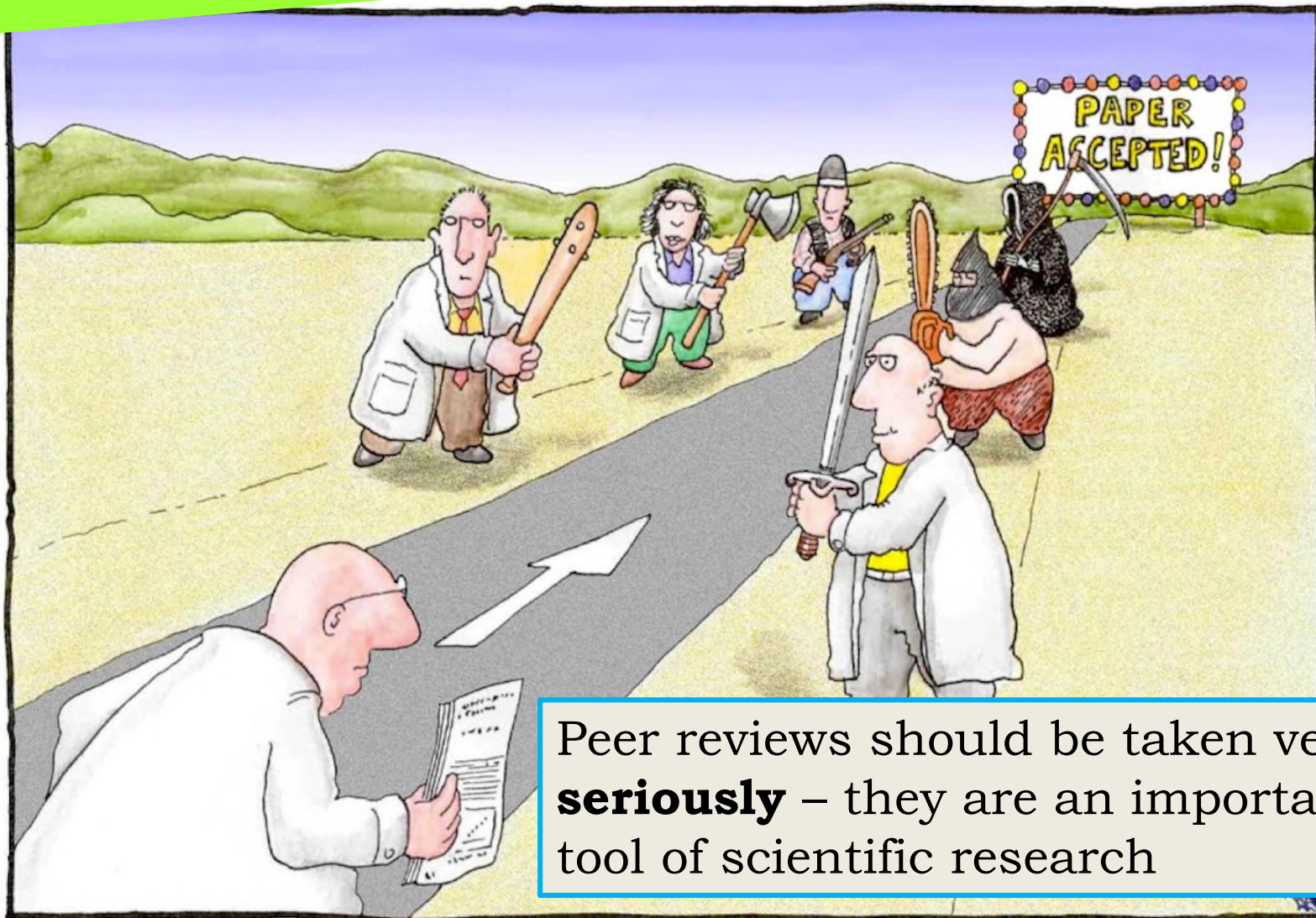
Name	Presentation	Feedback
Furrer, Frank J.: <i>Introduction</i>	09:20 – 10:00	
Höschele, Daniel	10:00 – 10:15	10:15 – 10:25
Horn, Richard	10:25 – 10:40	10:40 – 10:50
Rose, Christian	10:50 – 11:05	11:05 – 11:15
Break	11:15 – 11:35	
Schneider, Michael	11:35 – 11:50	11:50 – 12:00
Furrer, Frank J.: <i>Final Comments</i>	12:00 – 12:30	
Final Discussion	12:30 – 12:40	

1. Introduction (F.J. Furrer)

1st Round:

Observations and Recommendations

<http://genomicenterprise.com/blog/2010/09/03>



Peer reviews should be taken very **seriously** – they are an important tool of scientific research

The peer reviews were fair and helpful – *but rather short*

Peer Evaluations: Some "Do's"

1. Do treat the writer with courtesy and respect.
2. Do comment on the performance, not the person.
3. Do focus on how the argument is supported (or not), rather than whether you agree or disagree with it.
4. Do aim for balance and completeness in pointing out strengths and problem areas.
5. Do comment on specific examples of strengths and problem areas.
6. Do aim to help the writer see how to improve future work as well as the current draft.

Peer Evaluations: Some "Don't's"

1. Don't use snippy marginal comments such as "So what?" or "What's your point?"
2. Don't get into debates over unresolvable questions of individual value and belief (for example, questions relating to religion, gun control, or abortion).
3. Don't argue with the writer. Raise objections or ask for explanations only to clarify and suggest ways of strengthening the argument.
4. Don't confine your comments to mechanical details.
5. Don't make vague, global comments.
6. Don't rewrite for the writer

<http://www.mhhe.com/mayfieldpub/maner/resources/peer5.htm>
<http://onlinelibrary.wiley.com/doi/10.1002/9780470750803.app1/pdf>

Main Observations:

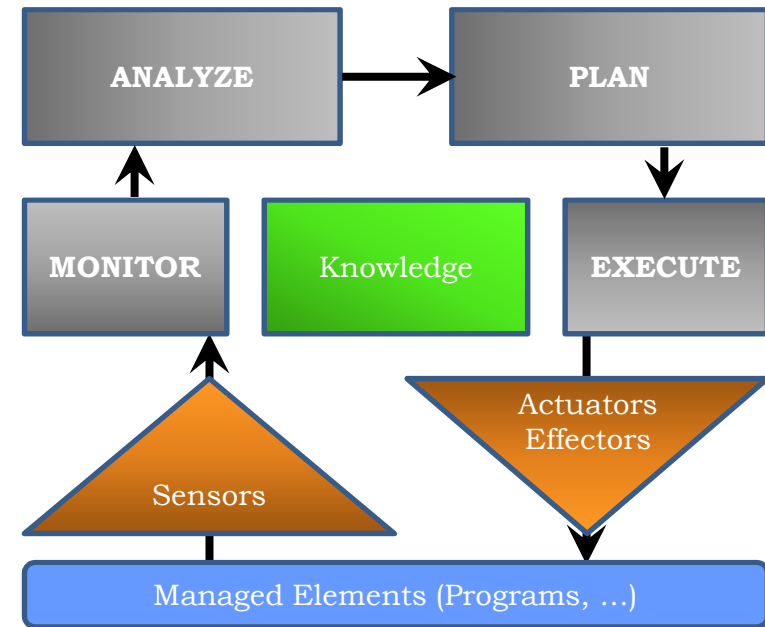
Theme

Fit to AC

good

All themes are well-chosen and very interesting – some are quite challenging!

Excellent fit of all themes to Autonomic Computing



<http://krav.ip>

Main Observations:

Context

improvable

<http://www.ignitionone.com>



Context is the environment in which your reader has to see your paper

Context description is the most suitable presentation of the field of interest which then allows the **focussing on the topic of the paper** (

Full sphere of knowledge



Topic of your paper

Main Observations:

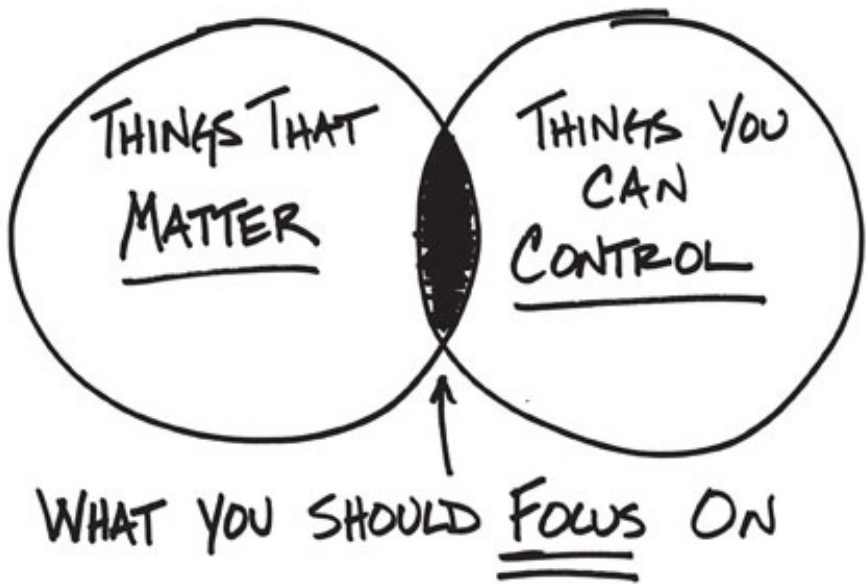
improvable

Focus

Restrict yourself clearly and consistently to a well-defined topic

Precision

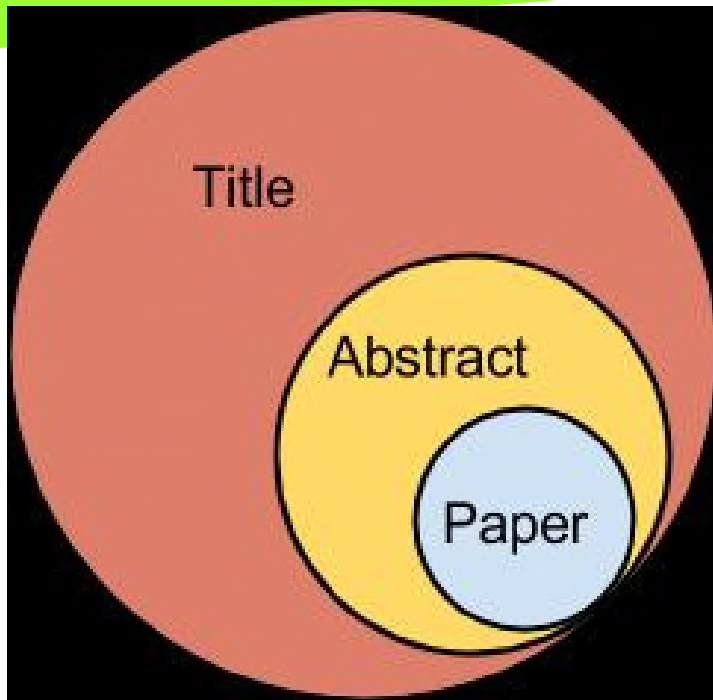
Express exactly and unambiguously what you want to communicate



BEHAVIORGAP.COM



<http://blog.wika.de>



Title

improvable

General observation:

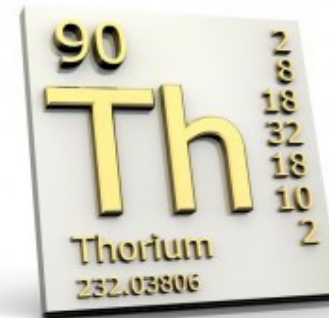
The titles were **not** sufficiently «seducing» and promising

Good academic titles reveal not only the topic of the paper but some idea of your specific approach, argument, and area of discussion

A great academic title should tell your readers as much as possible about your paper's central claim and its significance

How do I write a great title for my academic essay? University of Michigan – Sweetland Center for Writing
<http://www.lsa.umich.edu/UMICH/sweetland/Home/Undergraduate/Writing%20Guides/HowDoIWriteaGreatTitle.pdf>

Message \Leftrightarrow Title



Audience: YOU!

- *Background:* mathematical-physical-engineering education
- *Prior knowledge:* basic nuclear physics
- *Expectations:* Possible solution to world's energy problem?
- *Reason for attendance:* critical assessment, gain of knowledge

Key message:

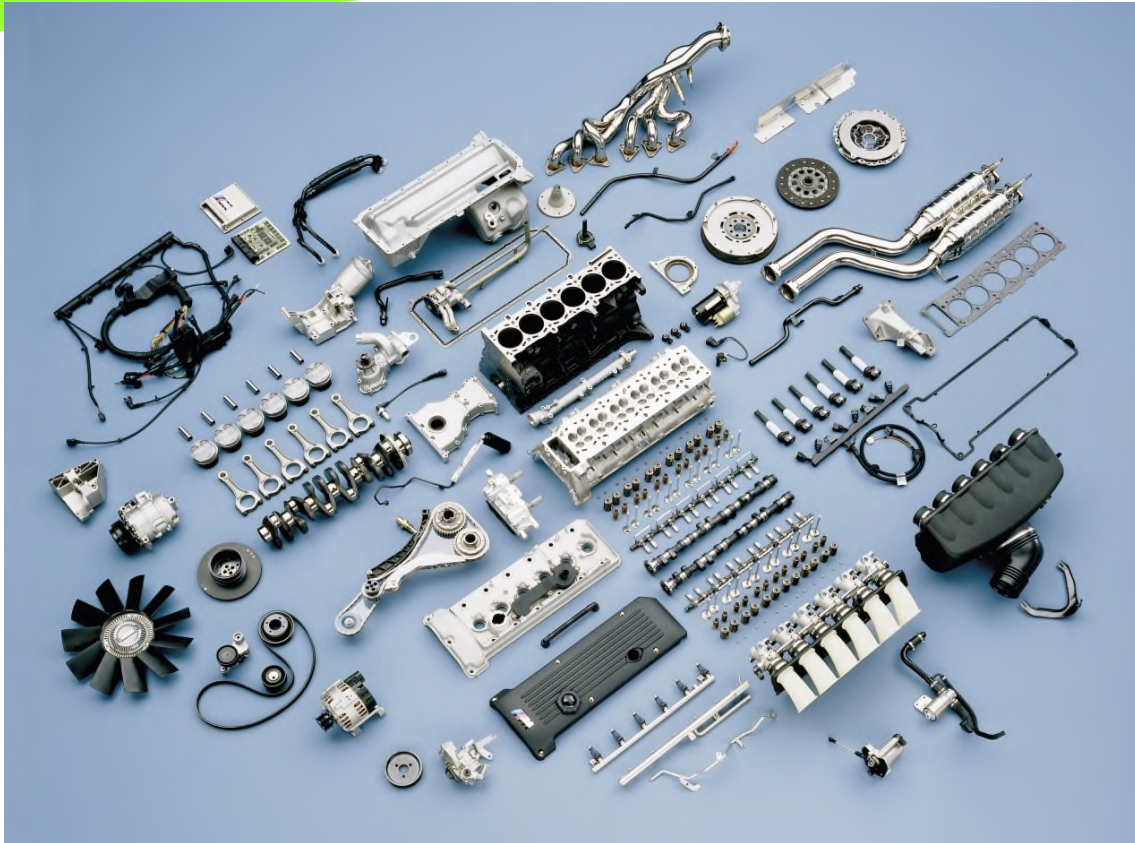
«THORIUM – The Green Energy Source of the Future»

Richard Martin: **Superfuel – Thorium, the green energy source of the future.**

Palgrave MacMillan Publishers, New York, USA, 2012. ISBN 978-0-230-11647-4

improvable

<http://newboldbmw.com/BMWParts.aspx>



Concepts

- ✓ Some concepts are ill defined or not defined at all
- ✓ Are really all introduced concepts necessary for the storyline? ⇐ Repeated checks & elimination necessary

improvable

<http://newartcolorz.com/cat/4/210522.html>



- **State of the Art**
- **Message of the Paper**

✓ The state of the art: a) what is the current knowledge?
b) which is the related literature?

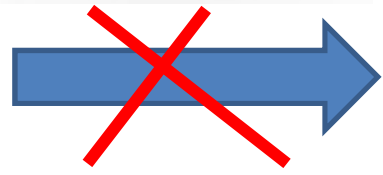
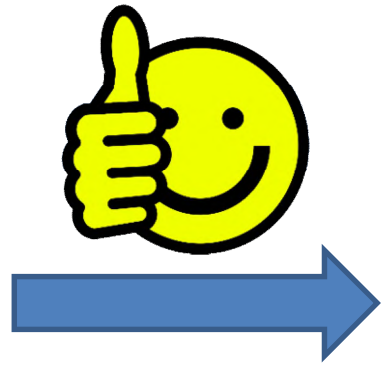
✓ Message of the paper: a) what is the new knowledge?
b) which is the contribution of the author? c) why is it important? **⇐ NOT in the conclusions, but a separate chapter before**

improvable

1



Storyline
(= Logical, consistent, complete sequence of thoughts)



2

Paper
(= Interesting, well-written, valuable sequence of sections)

A paper based on a weak storyline will **NEVER** be good

improvable

<https://lwallenberg2.files.wordpress.com>



Language

- German
- English



<http://www.prs.proof.net>

Use proofing tools!

Use a spell checker!

<https://www.grammarly.com>

<http://www.whitesmoke.com/>

etc.

... and: You all *underestimated* the required time !

<https://www.dutimes.com>



Consequence:

- Stress
- Dissatisfaction with yourself
- Unsatisfactory result
- Bad conscience
- Unhappy teacher 😞




What can you do against time-stress?

Planning !

Plan 1: Storyline \Leftarrow *Conceptual plan of **content***

Plan 2: Time-plan – *Chapter/ Section \Leftrightarrow **date***



Die meiste Zeit geht
dadurch verloren,
dass man nicht zu
Ende denkt

Alfred Herrhausen (1930-1989)

Fazit: Writing a **good** paper is **very hard** work !

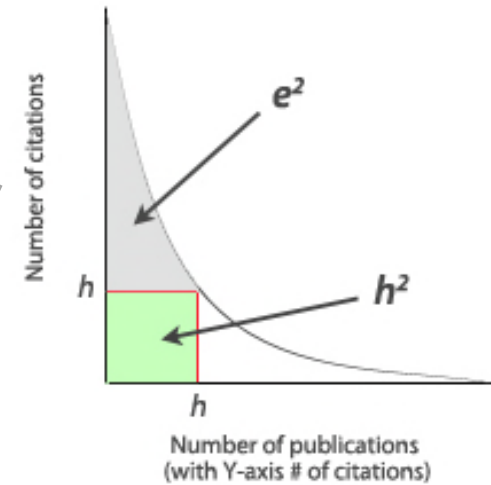


<http://www.stoneproject.org>

Writing convincing and admirable papers is a **key factor** for career success

The impact or "quality" of a paper is assessed by counting the number of times **other** authors refer it in their work

Academia



<http://www.benchfly.com>

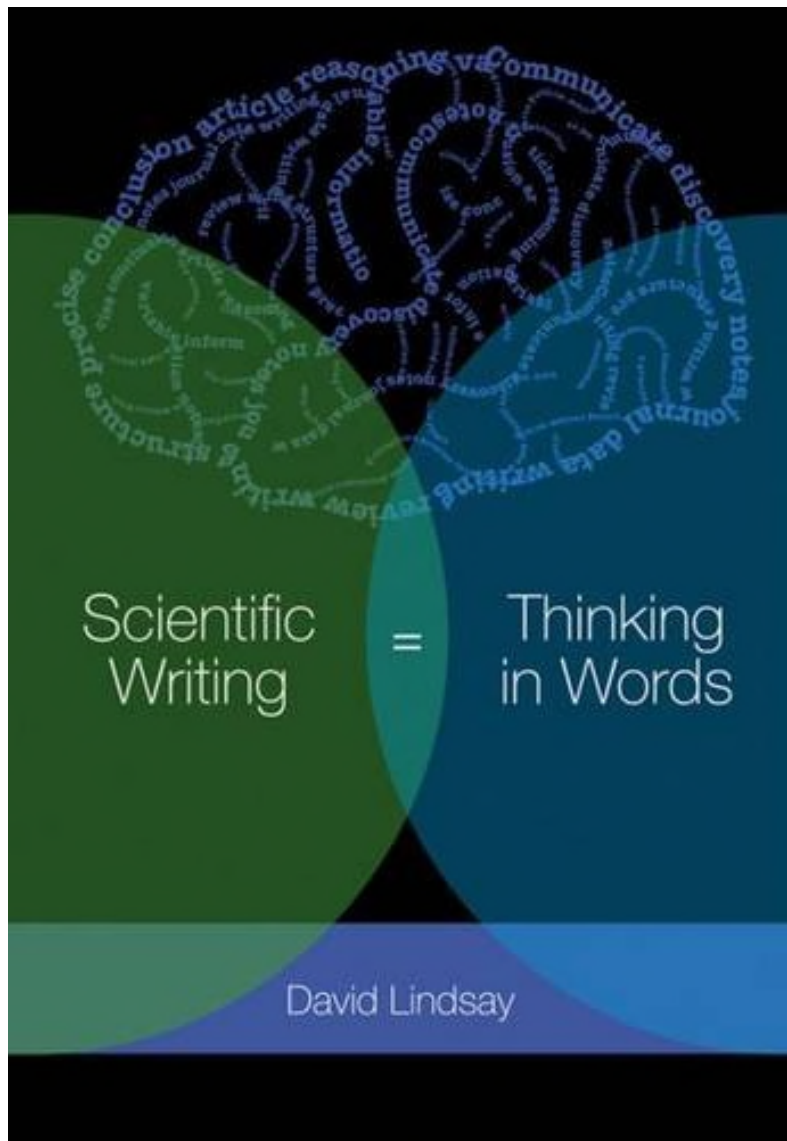
<http://www.jobsoresume.com>



Industry



<http://www.lotspage.com>



David Lindsay:

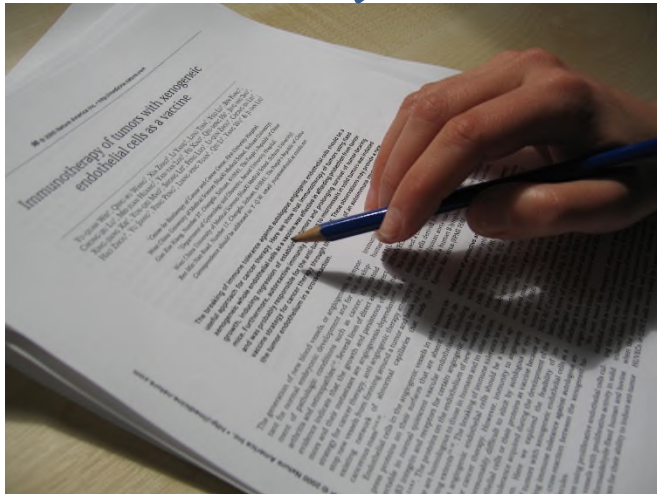
Scientific Writing = Thinking in Words

CSIRO Publishing (Australia)
2013
ISBN 978-0-643-10046-6

Importance of good reviewers: **Academia**

Feedback for Author
Decision for Publisher

<http://science.spb.ru>



<http://data-mining.philippe-fourmier-viger.com>

- Reputation
- Conference Program Committees
- Visibility
- Networking



Importance of good reviewers: **Industry**

<https://aos.iacpublishinglabs.com>

<https://images.template.net>

Project Proposal

Applied Accounting Services
12250 NE 131st Way, Suite 305
Kirkland, WA 98034
(PH) 425-760-8478
(FAX) 425-760-8479
AAServices.com

August 20, 20xx

Project Title

Provision of Accounting and Payroll Services

Prepared for: Rachel Kenberry
General Manager
Valley Fitness, Inc.

Prepared by: Marty Trasker
President
AAS Inc.

Description

Valley Fitness, Inc is in need of Accounting and Payroll services to take over for an overburdened owner/manager. With limited office staff, the accounting and payroll functions have been suffering. Outsourcing these office activities to AAS will allow the owners/management to focus on the core aspects of their business.

Proposal Number: 534-20xx



- Reputation
- Visibility
- Trust
- Expert status
- Soft Skills demonstration



2. Presentations and Feedback

1st Round:

Name	Presentation	Feedback
Furrer, Frank J.: <i>Introduction</i>	09:20 – 10:00	
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Final Discussion	12:30 – 12:40	

Procedure

Presentation
(15 mins)



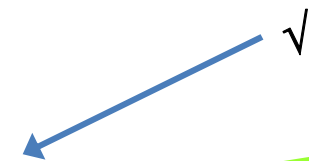
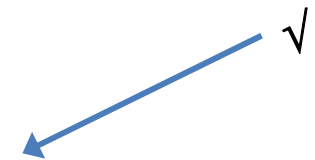
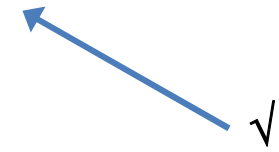
Audience
Feedback
(10 mins)

FEEDBACK: Each participant:

1. One positive comment
2. One improvement comment

Storyline	• Logical	Excellent	<input type="checkbox"/>
	• Consistent	Good	<input type="checkbox"/>
	• Attractive	Improvable	<input type="checkbox"/>
Illustrations Pictures	• Clear	Excellent	<input type="checkbox"/>
	• Fitting/Adequate	Good	<input type="checkbox"/>
	• Granularity	Improvable	<input type="checkbox"/>
Animation	• Power of Expression	Excellent	<input type="checkbox"/>
	• Support of Speaker	Good	<input type="checkbox"/>
	• Unnecessary effects	Improvable	<input type="checkbox"/>
Density	• Timing	Excellent	<input type="checkbox"/>
	• Too dense (per slide or per time unit)	Good	<input type="checkbox"/>
	• Too slow (more material per slide or per time unit)	Improvable	<input type="checkbox"/>
Delivery	• Balance of slides	Excellent	<input type="checkbox"/>
	• Bullet point lists	Good	<input type="checkbox"/>
	• Personal style	Improvable	<input type="checkbox"/>
	• Interaction with the audience	Excellent	<input type="checkbox"/>
	• Complementary speech/illustrations	Good	<input type="checkbox"/>
		Improvable	<input type="checkbox"/>

Storyline	<ul style="list-style-type: none"> • Logical • Consistent • Attractive • Clear 	Excellent <input type="checkbox"/> Good <input type="checkbox"/> Improvable <input type="checkbox"/>
Illustrations Pictures	<ul style="list-style-type: none"> • Fitting/Adequate • Granularity • Power of Expression • Support of Speaker 	Excellent <input type="checkbox"/> Good <input type="checkbox"/> Improvable <input type="checkbox"/>
Animation	<ul style="list-style-type: none"> • Focussed (message of the slide) • Speed • Unnecessary effects • Timing 	Excellent <input type="checkbox"/> Good <input type="checkbox"/> Improvable <input type="checkbox"/>
Density	<ul style="list-style-type: none"> • Too high • Too low • Balance of slides • Bullet point lists 	Excellent <input type="checkbox"/> Good <input type="checkbox"/> Improvable <input type="checkbox"/>
Delivery	<ul style="list-style-type: none"> • Personal style • Interaction with the audience • Complementary speech/illustrations 	Excellent <input type="checkbox"/> Good <input type="checkbox"/> Improvable <input type="checkbox"/>
Message	<ul style="list-style-type: none"> • Precise • True • „catching“ 	Excellent <input type="checkbox"/> Good <input type="checkbox"/> Improvable <input type="checkbox"/>



What is the sure death of a good presentation ?

<http://info.everywoman.com>

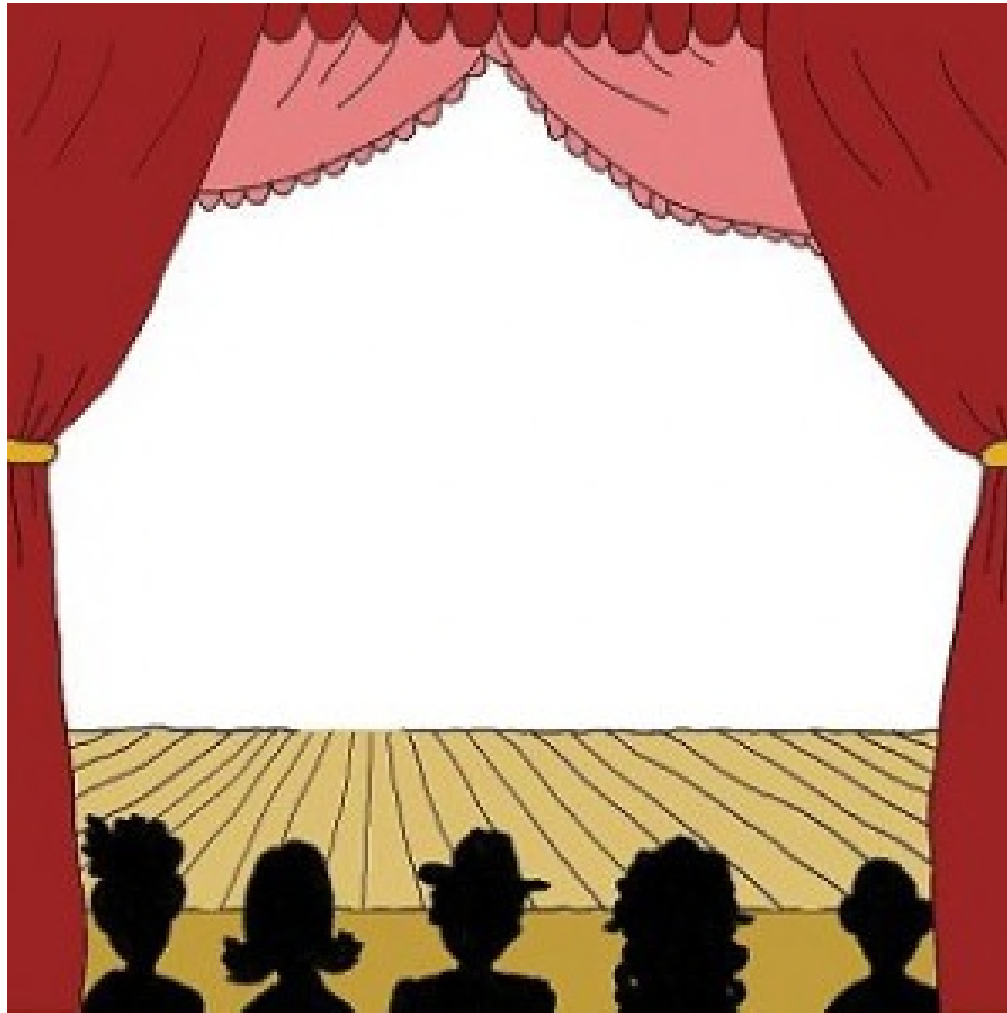


Time overrun !



<http://www.wfs.org>

<http://www.ioannamartin.tv/inspiration/will-you-ever-meet-your-ideal-client/>



... the stage is yours!

Name	Presentation	Feedback
Daniel Höschele	10:00 – 10:15	10:15 – 10:25

Storyline	<ul style="list-style-type: none"> • Logical • Consistent • Attractive • Clear 	Excellent <input type="checkbox"/> Good <input type="checkbox"/> Improvable <input type="checkbox"/>
Illustrations Pictures	<ul style="list-style-type: none"> • Fitting/Adequate • Granularity • Power of Expression • Support of Speaker 	Excellent <input type="checkbox"/> Good <input type="checkbox"/> Improvable <input type="checkbox"/>
Animation	<ul style="list-style-type: none"> • Focussed (message of the slide) • Speed • Unnecessary effects • Timing 	Excellent <input type="checkbox"/> Good <input type="checkbox"/> Improvable <input type="checkbox"/>
Density	<ul style="list-style-type: none"> • Too high • Too low • Balance of slides • Bullet point lists 	Excellent <input type="checkbox"/> Good <input type="checkbox"/> Improvable <input type="checkbox"/>
Delivery	<ul style="list-style-type: none"> • Personal style • Interaction with the audience • Complementary speech/illustrations 	Excellent <input type="checkbox"/> Good <input type="checkbox"/> Improvable <input type="checkbox"/>
Message	<ul style="list-style-type: none"> • Precise • True • „catching“ 	Excellent <input type="checkbox"/> Good <input type="checkbox"/> Improvable <input type="checkbox"/>

✓

✓

✓

✓

✓

✓

Name	Presentation	Feedback
Richard Horn	10:25 – 10:40	10:40 – 10:50

Storyline	<ul style="list-style-type: none"> • Logical • Consistent • Attractive • Clear 	Excellent <input type="checkbox"/> Good <input type="checkbox"/> Improvable <input type="checkbox"/>
Illustrations Pictures	<ul style="list-style-type: none"> • Fitting/Adequate • Granularity • Power of Expression • Support of Speaker 	Excellent <input type="checkbox"/> Good <input type="checkbox"/> Improvable <input type="checkbox"/>
Animation	<ul style="list-style-type: none"> • Focussed (message of the slide) • Speed • Unnecessary effects • Timing 	Excellent <input type="checkbox"/> Good <input type="checkbox"/> Improvable <input type="checkbox"/>
Density	<ul style="list-style-type: none"> • Too high • Too low • Balance of slides • Bullet point lists 	Excellent <input type="checkbox"/> Good <input type="checkbox"/> Improvable <input type="checkbox"/>
Delivery	<ul style="list-style-type: none"> • Personal style • Interaction with the audience • Complementary speech/illustrations 	Excellent <input type="checkbox"/> Good <input type="checkbox"/> Improvable <input type="checkbox"/>
Message	<ul style="list-style-type: none"> • Precise • True • „catching“ 	Excellent <input type="checkbox"/> Good <input type="checkbox"/> Improvable <input type="checkbox"/>

✓

✓

✓

✓

✓

✓

Name	Presentation	Feedback
Christian Rose	10:50 – 11:05	11:05 – 11:15

Storyline	<ul style="list-style-type: none"> • Logical • Consistent • Attractive • Clear 	Excellent <input type="checkbox"/> Good <input type="checkbox"/> Improvable <input type="checkbox"/>
Illustrations Pictures	<ul style="list-style-type: none"> • Fitting/Adequate • Granularity • Power of Expression • Support of Speaker 	Excellent <input type="checkbox"/> Good <input type="checkbox"/> Improvable <input type="checkbox"/>
Animation	<ul style="list-style-type: none"> • Focussed (message of the slide) • Speed • Unnecessary effects • Timing 	Excellent <input type="checkbox"/> Good <input type="checkbox"/> Improvable <input type="checkbox"/>
Density	<ul style="list-style-type: none"> • Too high • Too low • Balance of slides • Bullet point lists 	Excellent <input type="checkbox"/> Good <input type="checkbox"/> Improvable <input type="checkbox"/>
Delivery	<ul style="list-style-type: none"> • Personal style • Interaction with the audience • Complementary speech/illustrations 	Excellent <input type="checkbox"/> Good <input type="checkbox"/> Improvable <input type="checkbox"/>
Message	<ul style="list-style-type: none"> • Precise • True • „catching“ 	Excellent <input type="checkbox"/> Good <input type="checkbox"/> Improvable <input type="checkbox"/>

✓

✓

✓

✓

✓

✓



coffee break

Name	Presentation	Feedback
Michael Schneider	11:35 – 11:50	11:50 – 12:00

Storyline	<ul style="list-style-type: none"> • Logical • Consistent • Attractive • Clear 	Excellent <input type="checkbox"/> Good <input type="checkbox"/> Improvable <input type="checkbox"/>
Illustrations Pictures	<ul style="list-style-type: none"> • Fitting/Adequate • Granularity • Power of Expression • Support of Speaker 	Excellent <input type="checkbox"/> Good <input type="checkbox"/> Improvable <input type="checkbox"/>
Animation	<ul style="list-style-type: none"> • Focussed (message of the slide) • Speed • Unnecessary effects • Timing 	Excellent <input type="checkbox"/> Good <input type="checkbox"/> Improvable <input type="checkbox"/>
Density	<ul style="list-style-type: none"> • Too high • Too low • Balance of slides • Bullet point lists 	Excellent <input type="checkbox"/> Good <input type="checkbox"/> Improvable <input type="checkbox"/>
Delivery	<ul style="list-style-type: none"> • Personal style • Interaction with the audience • Complementary speech/illustrations 	Excellent <input type="checkbox"/> Good <input type="checkbox"/> Improvable <input type="checkbox"/>
Message	<ul style="list-style-type: none"> • Precise • True • „catching“ 	Excellent <input type="checkbox"/> Good <input type="checkbox"/> Improvable <input type="checkbox"/>

✓

✓

✓

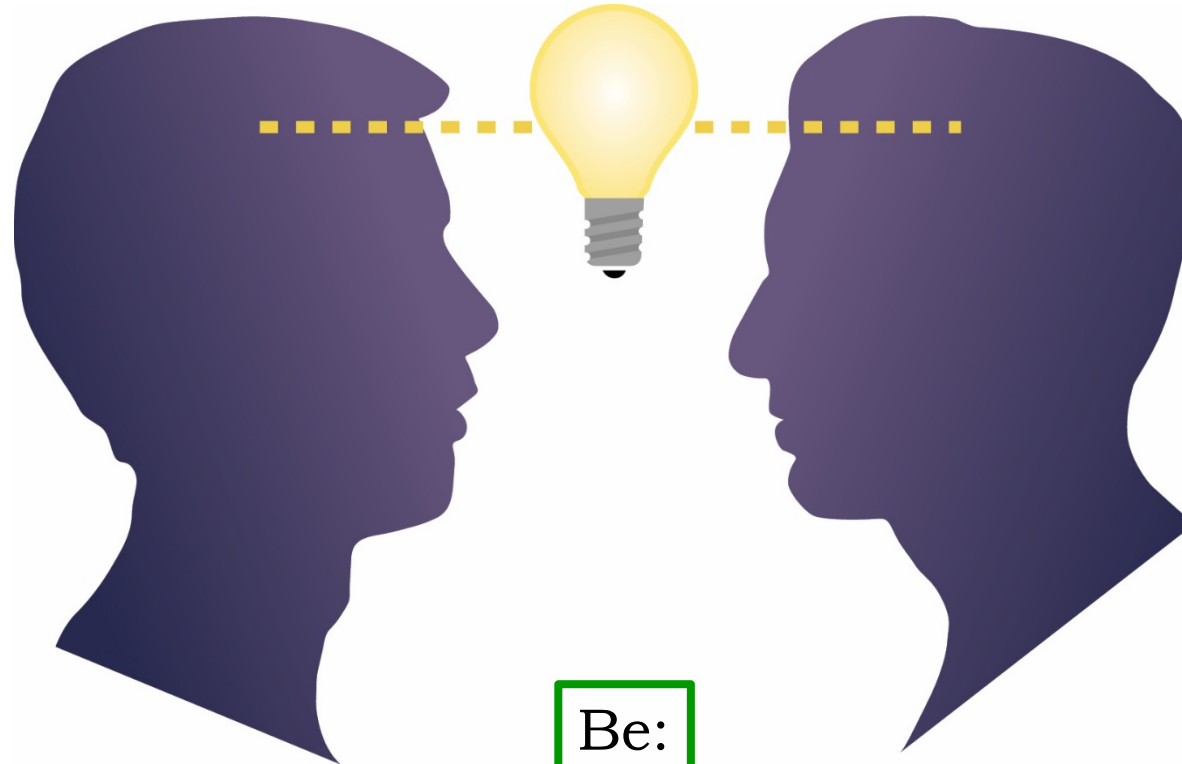
✓

✓

✓

3. Final Words

Papers and Presentations do *transport* ideas



<http://ii.library.jhu.edu>

Be:

• focussed

• precise

• interesting

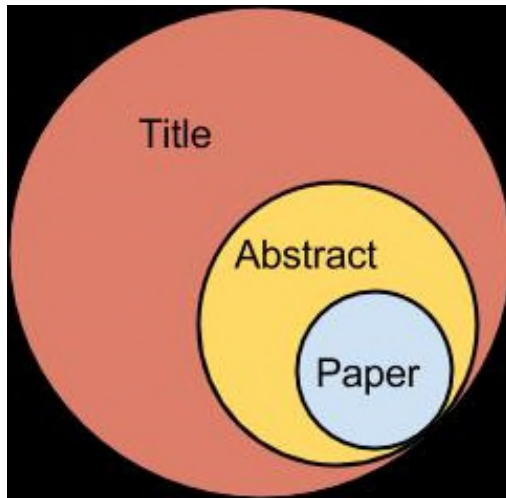
• understandable

• direct

3 areas of improvement:

Title

<http://blogs.nature.com/naturejobs/2014/11/03>



- ... catching
- ... promising
- ... seducing

Storyline

<http://www.hans-und-renate.de/2011/09>



- ... logical
- ... "simple"
- ... convincing

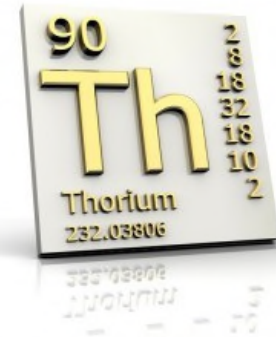
Unnecessary Concepts



<http://www.deviantart.com/morelikethis>

- ... minimize
- ... define
- ... consistency

Graphical Storyline Check



Key message:

«THORIUM
– The Green Energy Source of the Future»

Consequences and Dangers
of Uranium-Technology

- Radioactive waste
- Nuclear accidents
- Plutonium (weapons)

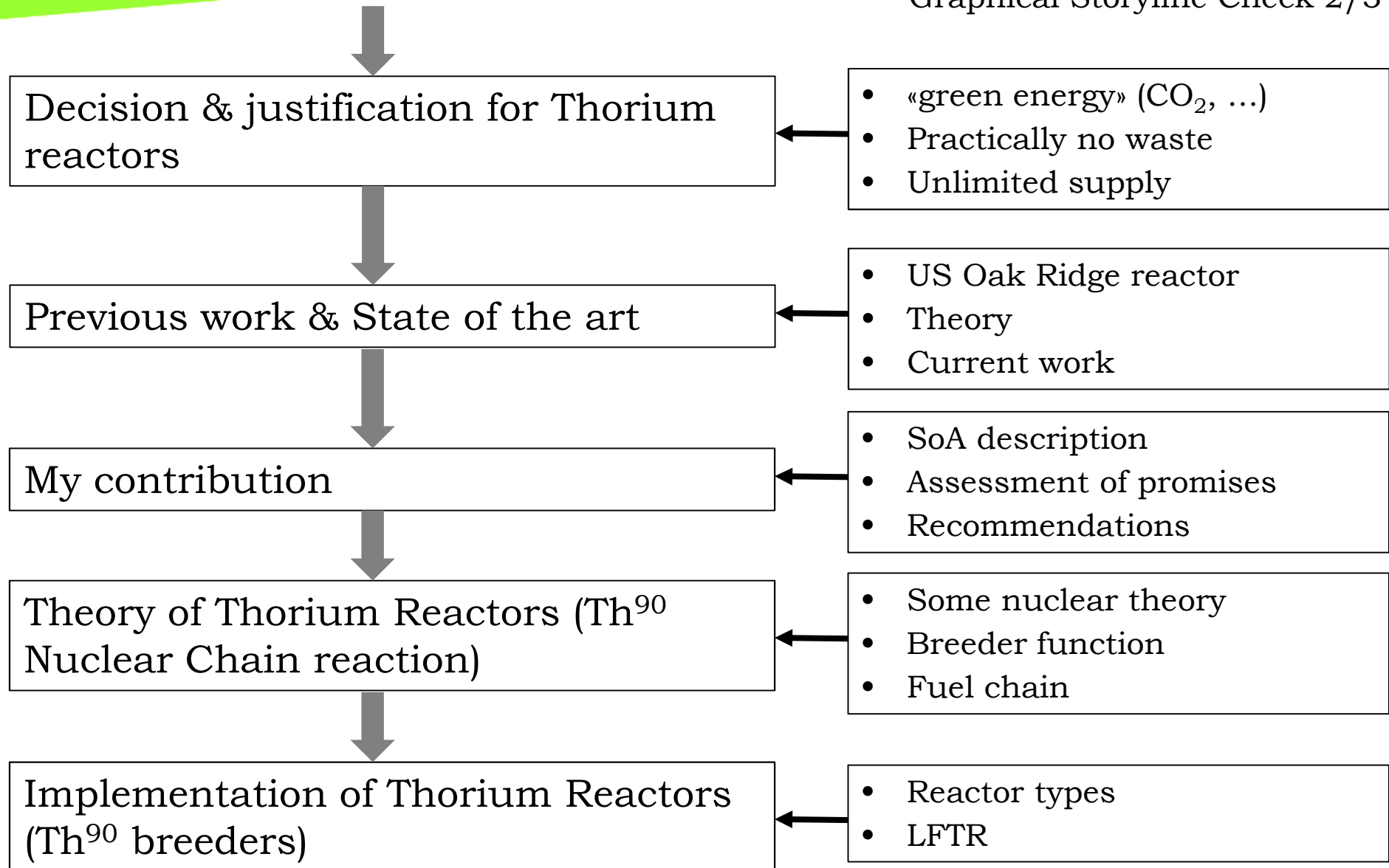
Need for a new, clean and safe
energy generation technology

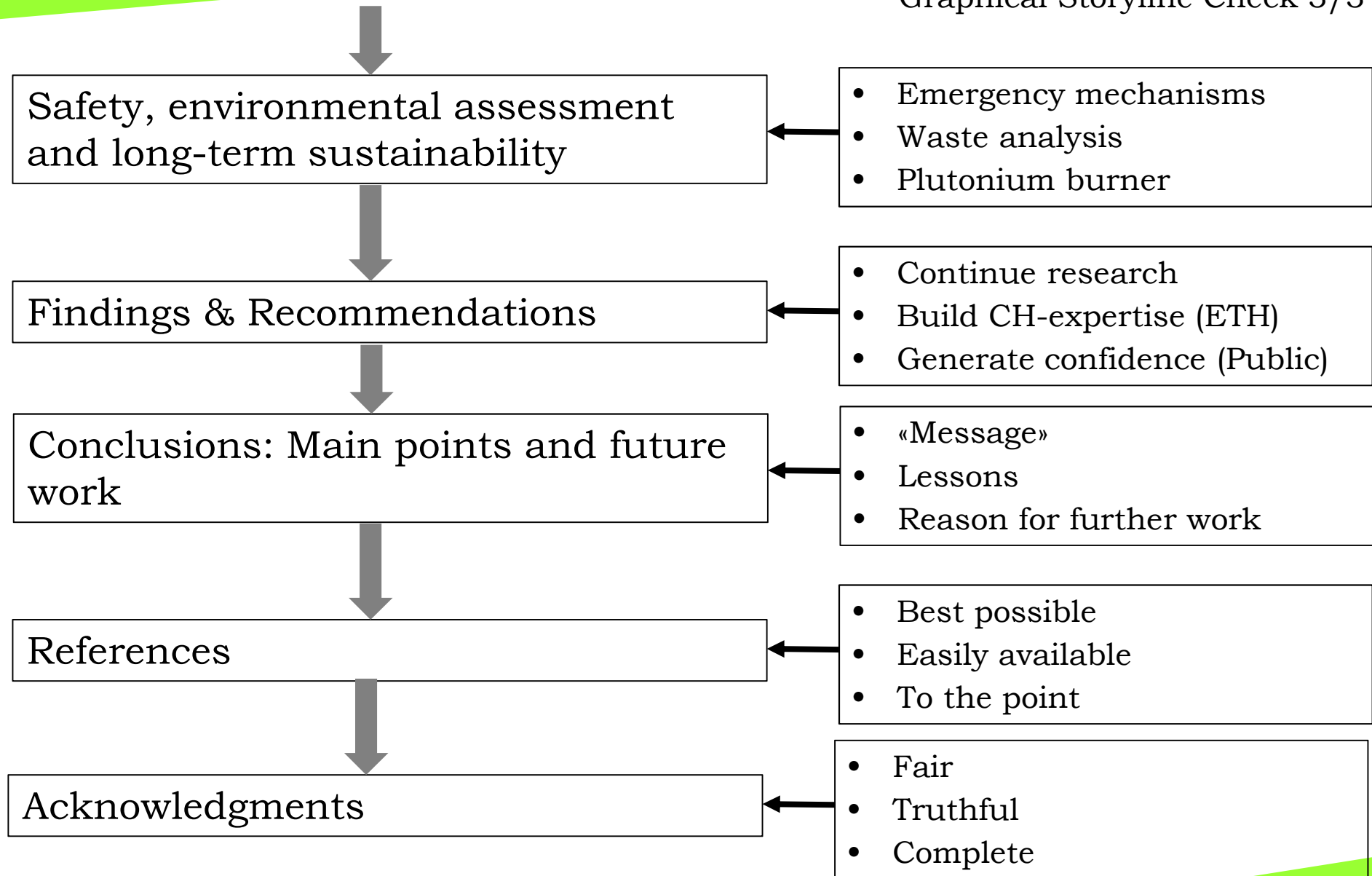
- environment
- zero accident potential
- Large scale affordability

Survey and assessment of energy
generation technologies

- «green energy»
- Nature protection
- Long-term sustainability

Logical line of thought





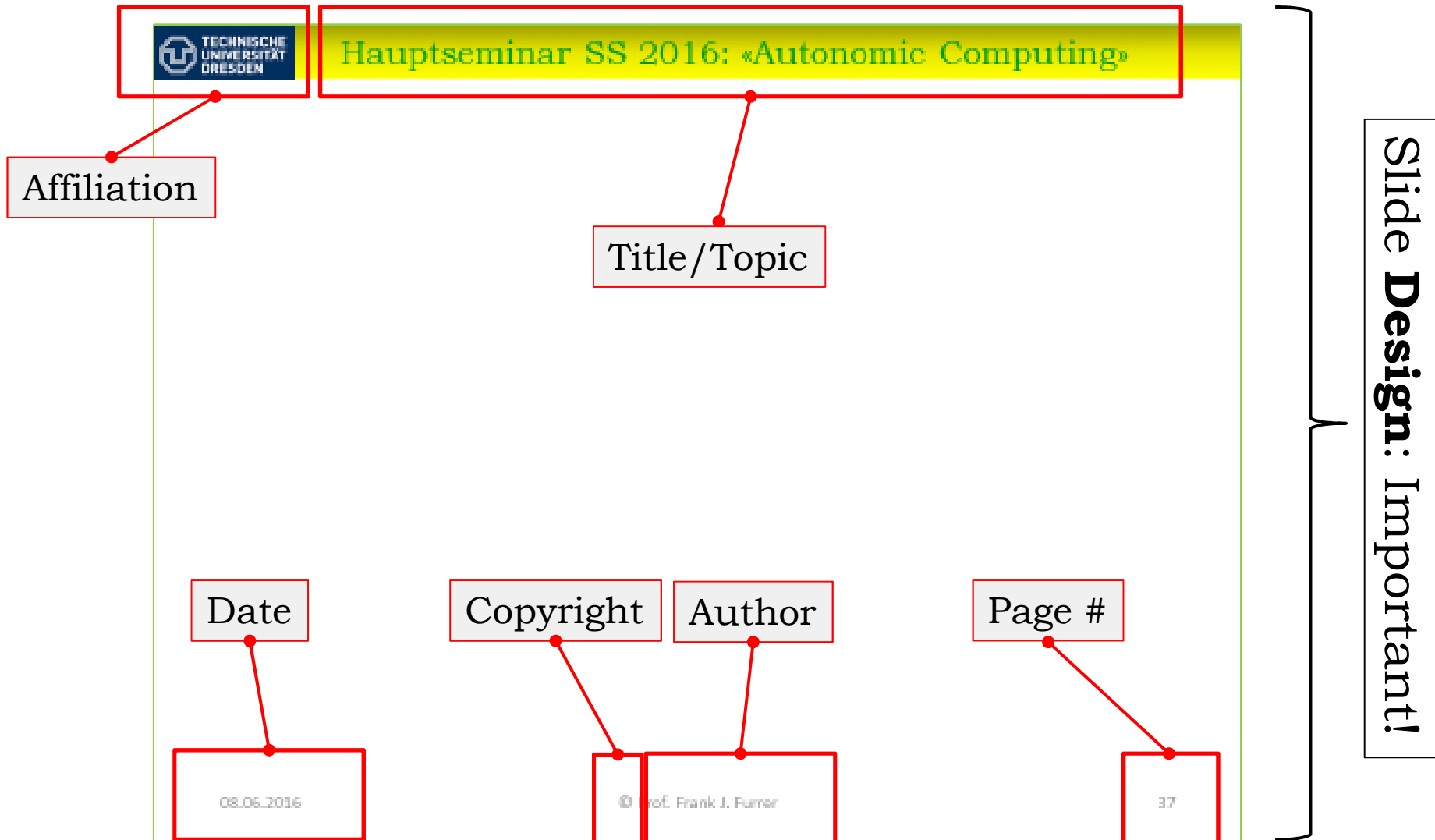
Eliminate unnecessary concepts

<http://www.pinstopin.com/sieve/>

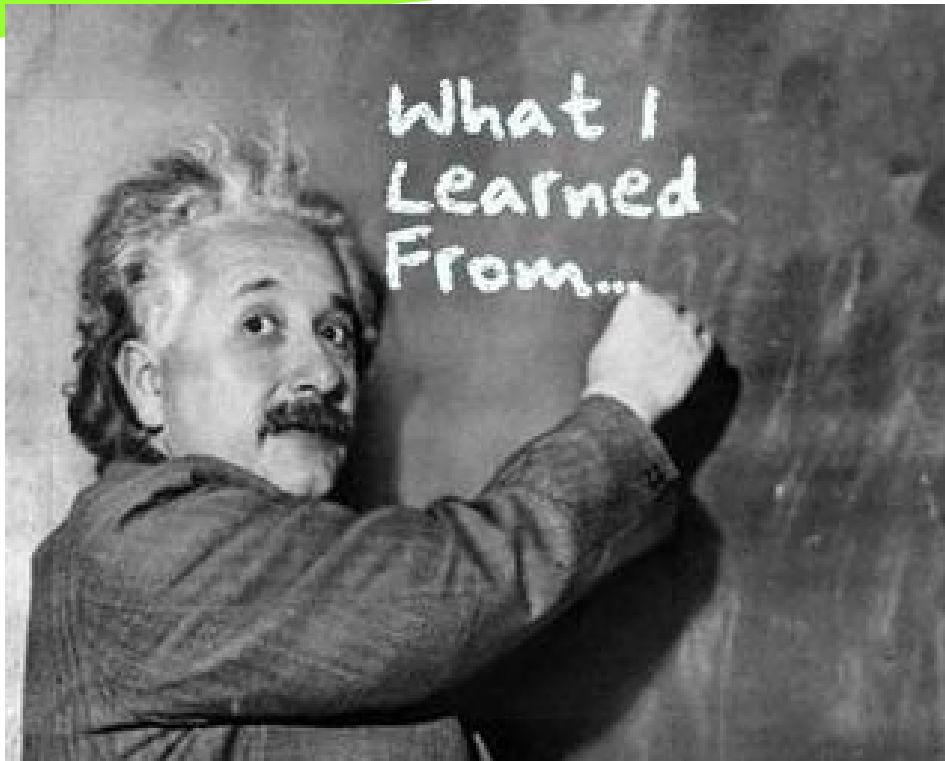


- Mark all **concepts** in your paper
- Is each concept really necessary?
⇒ if not, eliminate the ~~concept~~
- Are all the concepts well and precisely defined? ⇐ *ambiguity*?

Format of the Slides \Rightarrow Navigation Help!



<http://s574.photobucket.com>



What must your audience take home?



<http://www.protothema.gr>

Your Message!

... and the methods, insights, results of your work

Message



yes no

Clear ?

True ?

Important ?



<http://footage.framepool.com>

Message

Writing convincing and admirable papers is an **important soft skill** and a **key factor** for career success both in academia and in industry.

This lecture teaches proven techniques for becoming a **respected paper author**



<http://footage.framepool.com>

Clear ?	<input type="checkbox"/>	<input type="checkbox"/>
True ?	<input type="checkbox"/>	<input type="checkbox"/>
Important ?	<input type="checkbox"/>	<input type="checkbox"/>



Message

Writing **convincing** and **admirable** papers is an **important soft skill** and a **key factor** for **career success** both in academia and in industry.

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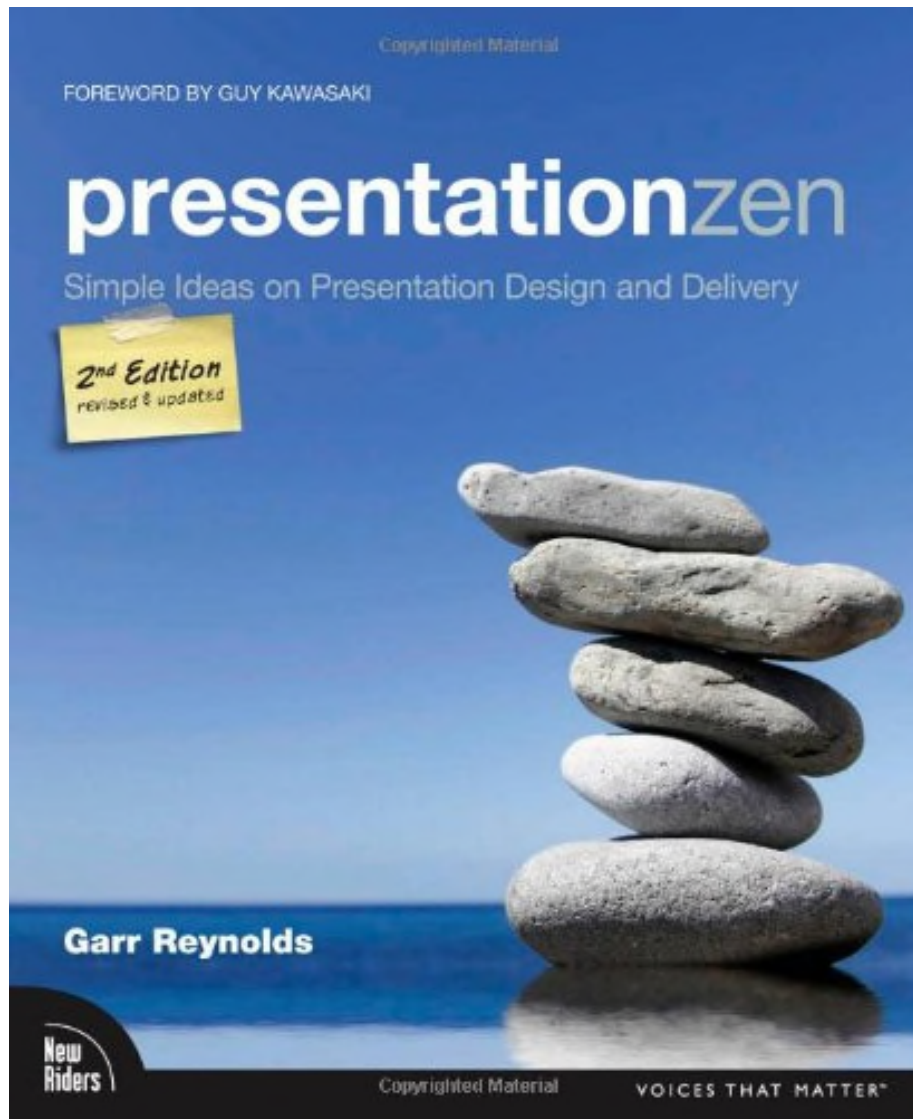
<http://footage.framepool.com>

← Note the precise terminology



The first objective is to ensure
that what **you** think you have said
is the same
as what the **reader** thinks you have said

David Lindsay, 2013, ISBN 978-0-643-10046-6



Garr Reynolds:

Presentation Zen:
Simple Ideas on Presentation
Design and Delivery

New Riders, 2nd revised edition, 2011
ISBN 978-0-3218-1198-1

Next Steps

Deliver 2 nd , improved draft of your paper to your peer reviewers	Friday, June 23, 2017	e-mail your paper: <ul style="list-style-type: none"> • Peer reviewers • frank.j.furrer@bluewin.ch
Feedback from Reviewers	Monday, July 3, 2017	By e-mail from: <ul style="list-style-type: none"> • The peer reviewers • frank.j.furrer@bluewin.ch
2nd Seminar Day	Wednesday, July 12, 2017: 09:20 – 10:50/11:10 - 12:40 (2. + 3. DS) Room APB/INF 2101	<ul style="list-style-type: none"> • 2nd participants presentation • Peer discussions, Feedback on style and content



Planning &
Time Management

Excellent, motivated work so far!
I like it a lot.



Feedback from your side?