

Tutorial: Whiteboarding 101

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Summary

- Whiteboard talks are one of the key ways that engineers can communicate structured information with colleagues
- A combination of teaching, storytelling, and improvisation
- An attendee will learn how to...
 - Structure a whiteboard talk
 - Narrow down the topic scope
 - Adapt to different audiences
 - Control the conversation

Unit 0: A Few Assertions

- Whiteboards allow for real-time visual organization of data
- People absorb information through narrative
- Giving people a reason to listen to you is just as important
- Whiteboards = Narrative + Visual organization

Unit 1: Setting Boundaries

- A whiteboard is a lecture with interactive elements. You have to set boundaries on what you're discussing, or you'll lose your audience.
- **Horizontal Boundaries:** What is the scope of your presentation, and how does it relate to the time you have and the audience?
- **Vertical Boundaries:** What is the level/range of abstraction of your talk, based on the audience? Tech people want data, Managers want strategy, Executives want ideas.

Unit 1: Setting Boundaries

- **Abstraction Barriers**
 - Once set, violate the level of abstraction at your peril.
 - Break out too high, and people will think you're handwaving
 - Break out too low, and you'll lose people in the weeds
- **Abstraction violation is a good self-check**
 - If you're talking and find yourself at a much different level of abstraction than you originally planned, you're probably not saying what you wanted to say.
 - Soln: Finish the thought, back up to the main concept, and continue.

Unit 2: Framing the discussion

- **Diagrams allow you to frame the discussion**
 - Magic Quadrant – Four categories, two dimensions
 - Number Line – Two categories, one dimension
 - Standard graph curves (log, power, bell) – specific behavior, two dimensions
- **Asserting the problem allows you to focus the discussion**
 - Your goal is to make sure everyone knows how you see the problem.
- **Offering a solution allows you to guide the discussion**
 - Agree or disagree, you're setting up a path to resolution.
 - Very similar to price anchoring. Set up the initial point of reference, and all debate becomes “anchored” around that solution.

Unit 2: Framing the debate

- **Examples**
 - **“Enterprises are moving to the cloud.”**
 - This is now a discussion about cloud migration
 - **“There are four fundamental types of bots/scrapers”**
 - Bot behavior can be organized, and there are only a handful of real differences
 - **“An error occurred.”**
 - The discussion is now about the error, and not who caused it.
 - **“Less Filling! / Tastes Great!”**
 - It’s not about which beer you like, it’s about how you like *our* beer.
- **A word about color**
 - Useful for framing (red = bad, green = good, etc.)
 - Always cap your markers

Unit 3: Building Your Model

- A whiteboard is a way to create a thought construct that can be implanted wholesale in an audience, by way of narrative.
- **“Know ten to teach three”**: You need more depth to teach a subject in order to dynamically adapt to different learning styles in the middle of a discussion.
- **“Choose your metaphors”**: The more ways you can describe a topic, the more audiences you can reach.

Unit 3: Building Your Model

- How many metaphors can you use to describe the TCP 3-Way Handshake?
- Describe a technical concept
 - In two minutes.
 - In one minute.
 - In 30 seconds.
 - In 10 seconds.
 - To your colleague
 - To your non-technical friend

Unit 4: Defining Your Terms

- You're attempting to create a thought construct in people's heads.
Vocabulary is important.
- **The words you use are the words your audience will use** to manipulate what you're talking about.
- When your audience says "So you're saying it's like X, but for Y", they're trying to impose their own vocabulary on the construct to make it more tractable, which might not be welcome if you're introducing a new concept.
- **So... what words do you want them to leave with?**

Unit 4.5: Words Are Important, and So Are Promises

- A brief word about being the adult in the room
- When you're up there, you're the expert until proven otherwise
- **Don't make stuff up. Ever.**
 - At best, you'll be giving wrong information to people who trust you.
 - At worst, you'll lose credibility with your audience, the rest of your talk will be for naught, *and* you'll be giving wrong information to people who trusted you.
- A brief word about parking lots
 - Things put in a parking lot are a promise. A promise that you'll learn, a promise that you'll respond in full, and a promise that you'll respond to every single follow-on question.

Unit 5: Controlling the Conversation

Agendas are Magic: Have an agenda, drive the agenda, stick to the agenda.

Agendas can be Blamed: There's no shame in moving along a talk by saying that "there's a lot to cover."

Invocation: Set the tone at the beginning, and give closure at the end, even if it's just "Thank you all for coming" and then "Have a good afternoon."

Unit 5: Controlling the Conversation

Deferring questions

- There's no shame in saying "I don't know."
- Parking lots are tricky (see previous), but they're necessary
- Make sure that people feel heard – they will know when they're not.

Bringing them back

- In a small group discussion, people will occasionally discuss things w/ each other
 - As long as it's a few seconds for them to sync up, no problem.
- More than one side-conversation? Intervene.
- Firmness is not necessarily rudeness

Unit 6: Letting The Audience In

- **Listen to the words of the question:** How technical are they? What's their vocabulary? Are they actually convinced by your last answer? Do they feel you're wasting their time?
- **Choose three proxies:** You're not going to be able to read every face in the room. Choose three people; left, center, and right. These people become your proxies for the audience.

Unit 6: Letting The Audience In

Checking In

- Verify that your audience has understood.
- The assumption is that questions can be asked during the entire discussion, unless you specify otherwise.
- Enough to confirm that people are following, not so much that it annoys
- Convenient way to keep people off of their phones

Questions and breaks

- Explicitly ask for questions every 30 minutes
- Set a 5 minute break every hour between mealtimes.
- Giving people permission to look at their phones means they will be doing it less during your actual talk.

Unit 7: The Standard Geek Pitfalls

There are particular ways that technical people fail at public speaking

Throwing knowledge at the audience

- Good for your friends over drinks, bad for your audience
- People will notice if you're throwing up a smoke screen

Taking questions *personally*

- Questions typically aren't challenges
- You are not being tested; this is not about you

Getting bogged down in questions

- Going deep into detail is a comfort zone, but it's not where your audience needs you to be.

Unit 7: The Standard Geek Pitfalls

Making stuff up (unintentionally)

- It's tempting to step off of the path in order to sound authoritative on something you're *mostly* sure about. Don't do it.
- You might succeed once, but what happens with the follow-on?

Breaking the flow of the talk with details

- “So last Thursday... was it Friday? Actually I think it was Tuesday...”
- Remember your level of abstraction

Jumping from topic to topic

- The way you know a topic is not necessarily the best way to show people a topic.

Unit 8: Dealing with problem audience members

The Sniper

- Ready with a side-comment, but never ready to participate
- Typically the person making commentary to their neighbors, and not whispering
- Even with IM, will probably type something and show the screen to others
- Solution: Include them whether they like it or not.
“Do you have something you’d like to add?”

The Bully

- Memetic immune response; it’s not enough for them to be right, you must be wrong.
- Must be right at all costs, including disruptiveness
- Solution: Isolate. Do **not** escalate.

Maintain silence and let them burn themselves out. They’ll back down if they think they’re genuinely alone. If they keep going on, ask someone with authority in the room a question.

Unit 8: Dealing with problem audience members

The Status-Seeker

- Don't necessarily want an answer to the question.
- Want to show their peers that they're the smartest person in the room.
- Solution: Recognize, and defer.

NAQMOAC

- “Not a question, more of a comment” – Ostensibly a question, but turns into a hijack of the conversation.
- “This isn't a question, but....”
- “Would the panel/speaker agree that....?”
- “I was wondering if.....?”
- Solution: Cut them off. There's nothing to be gained any other way.