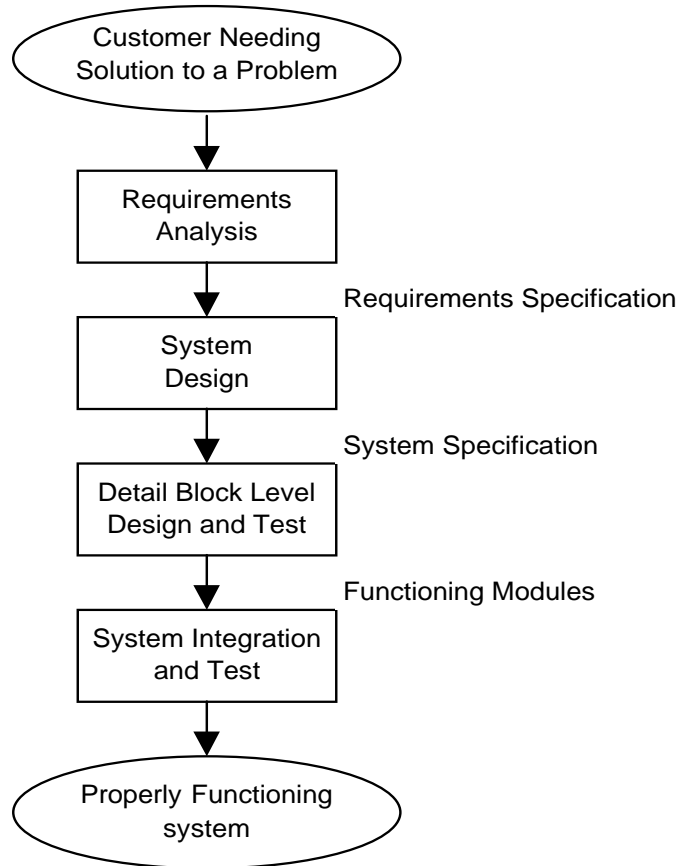


*SDP06*

# The Requirements Specification

ECE 415

...a quick review



# Needs Assessment – Stating the Problem

The problem statement should exhibit the following attributes:

- nontechnical
- nonquantifiable
- complete
- specifiable

## **Techniques for arriving at a problem statement**

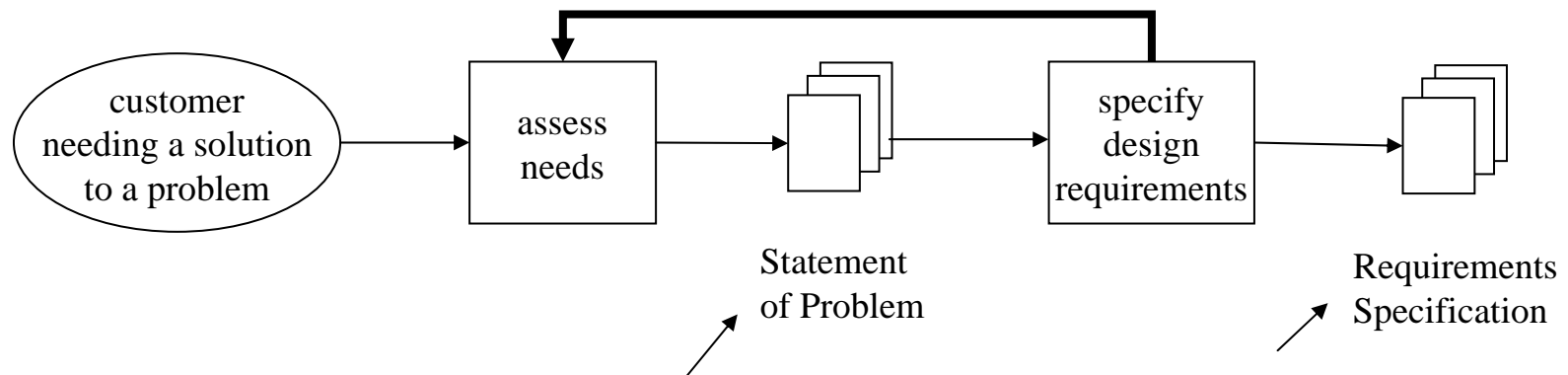
1. question the customer (virtual customer, the “customer” within)
2. differentiate needs and wants
3. explore project boundaries
4. input/output analysis
5. preview the user interface
6. survey design attributes
7. identify conflicting needs
8. prepare a draft operations manual

for an example, see Case Study, Appendix A,

# Two-stage approach for developing a requirements specification

Need for iteration

- Refining the problem statement raises questions about the customer's needs
- Specifying the requirements raises questions about the problem statement

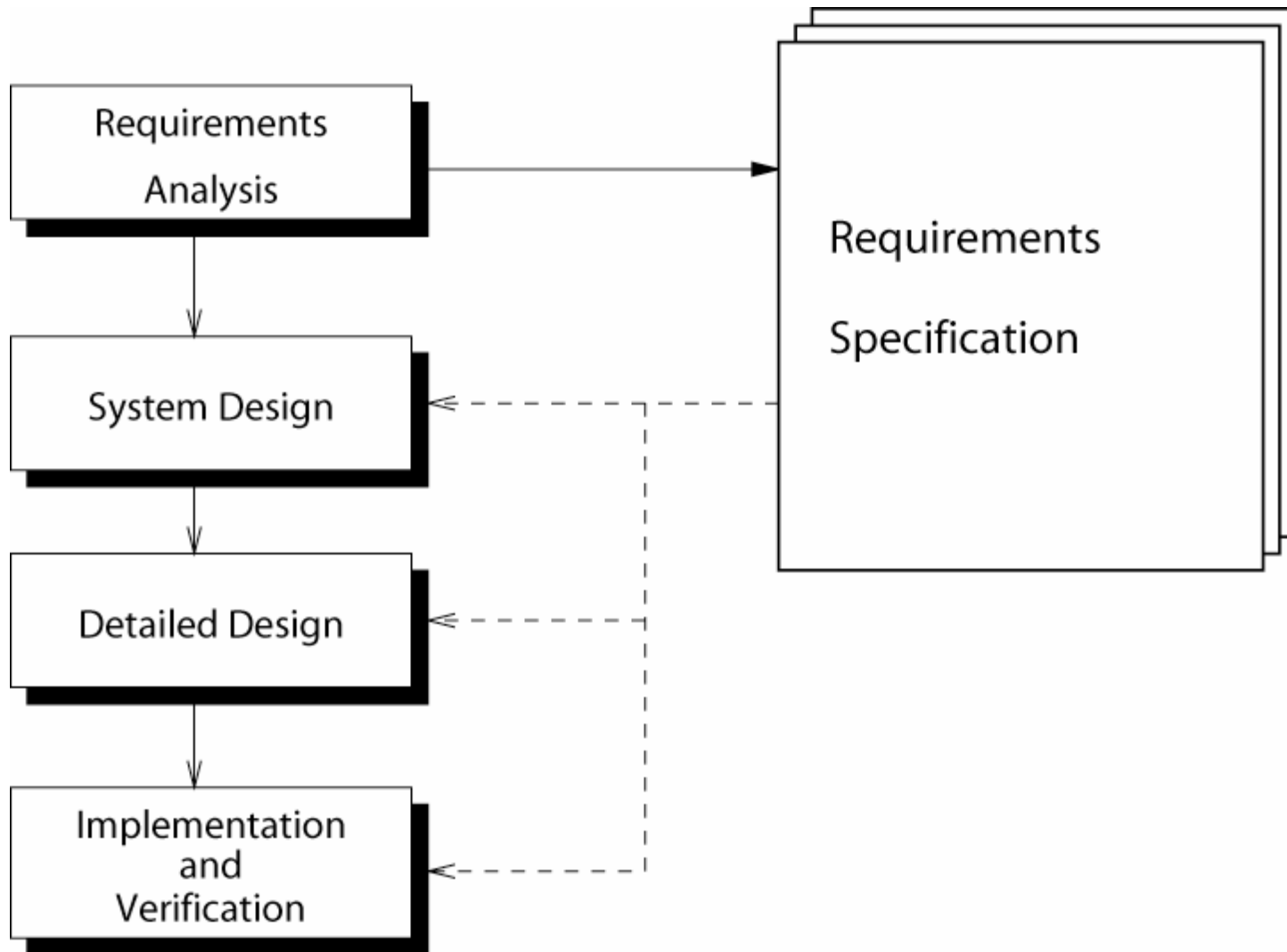


In the language of the customer, normally straightforward, nontechnical and noquantifiable.

concise statement of what the design will accomplish and a presentation of the criteria by which the finished design will be evaluated. It documents the answers to:

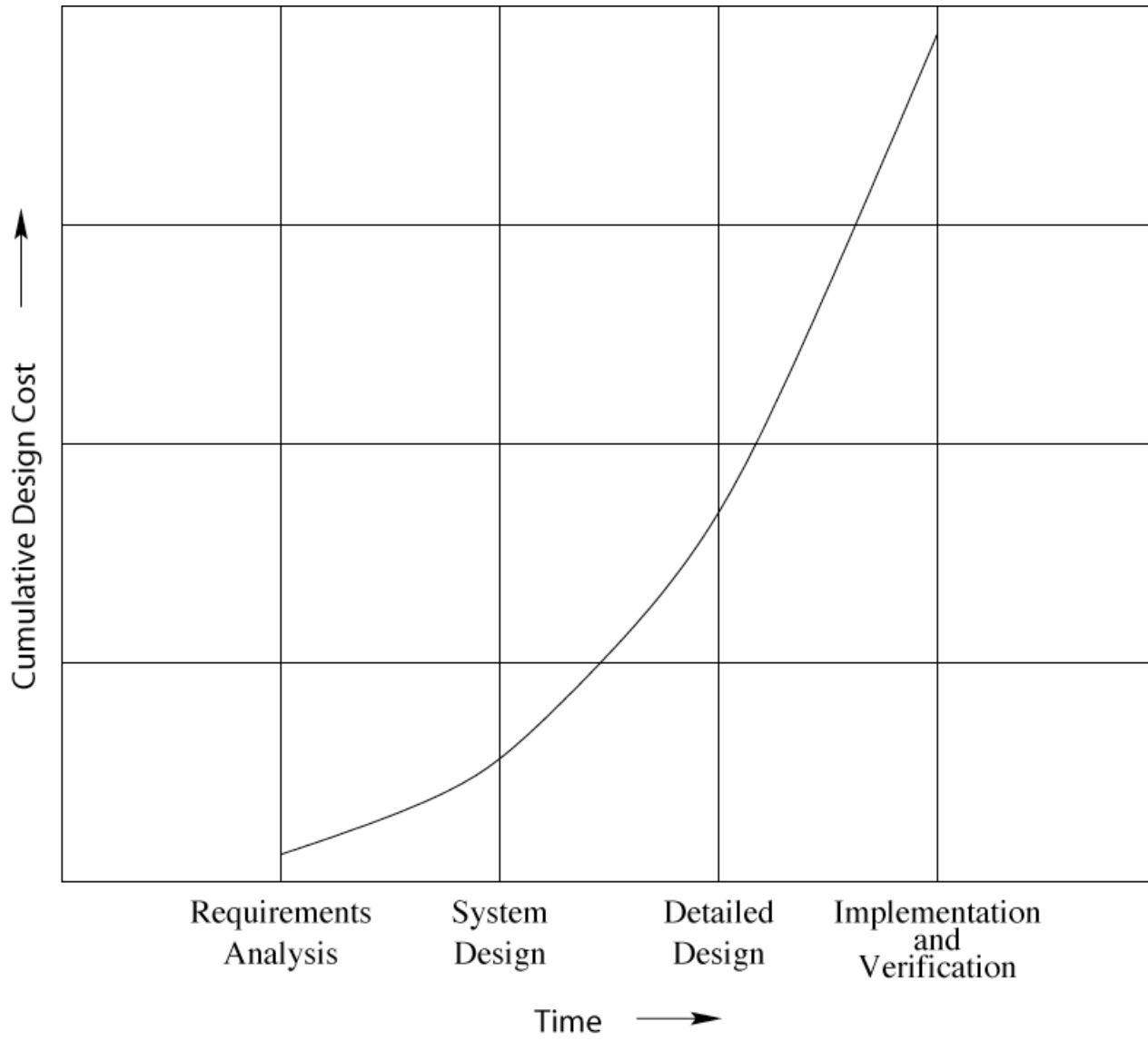
- What, exactly is the design team to do?
- How, will everyone know when the design is done?

How is the Requirements Spec  
used?

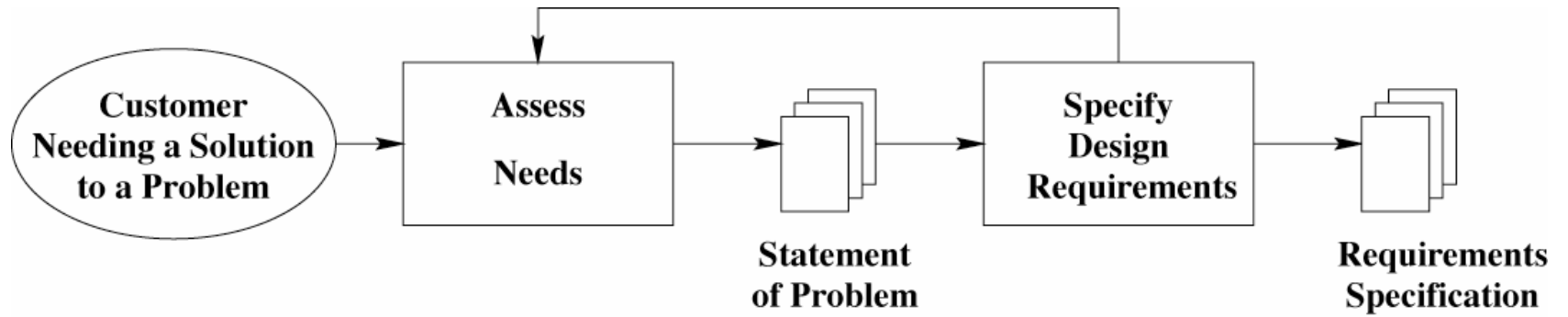


Why is it important to  
thoughtfully consider the Req  
Spec?

Product design is expensive!



Again... the two stage process

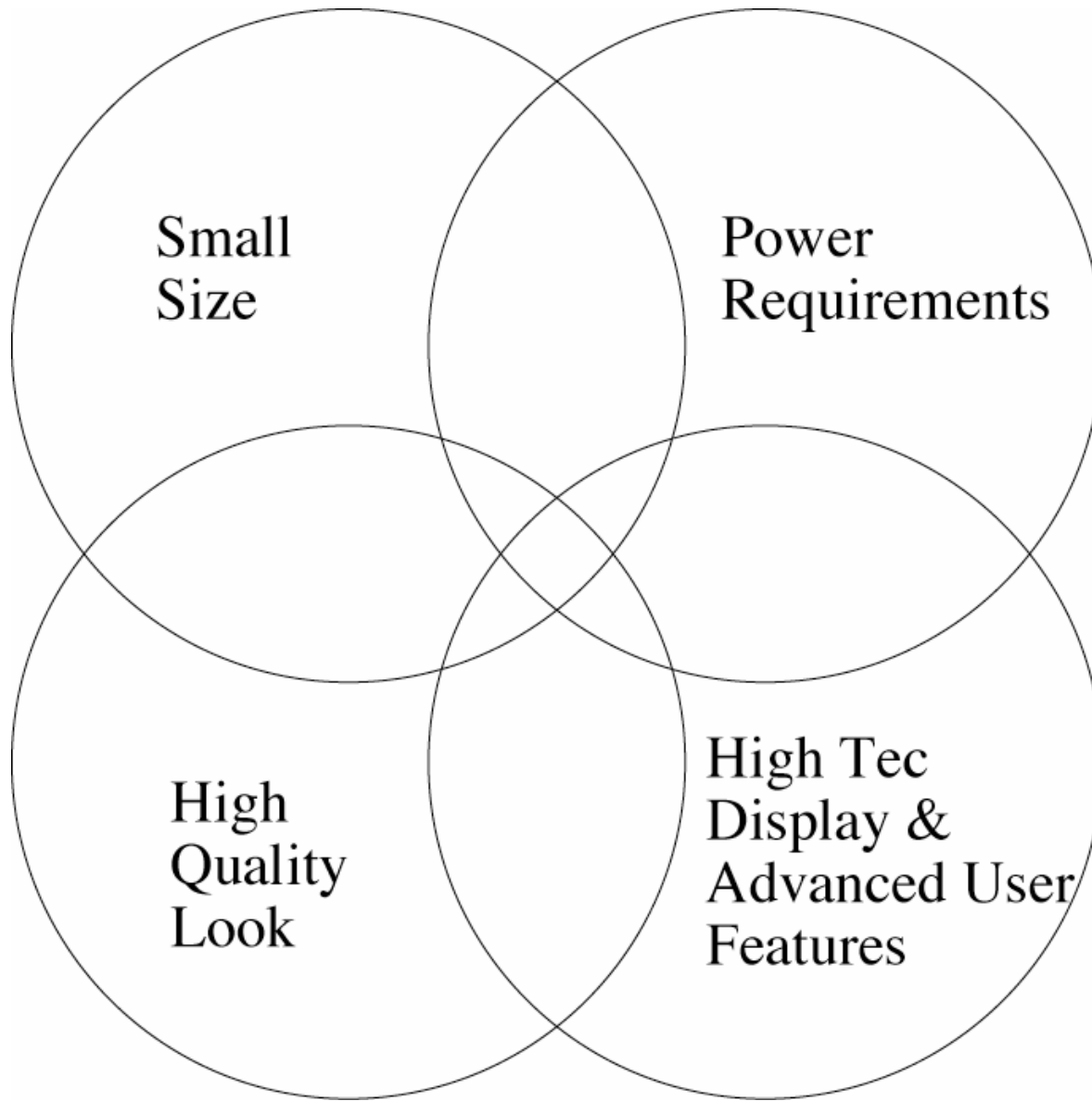


The Req Spec can be thought  
of as a technical restatement  
of...

...the Problem Statement.

Oddly enough...

A premature search for solutions must be avoided.



**Small  
Size**

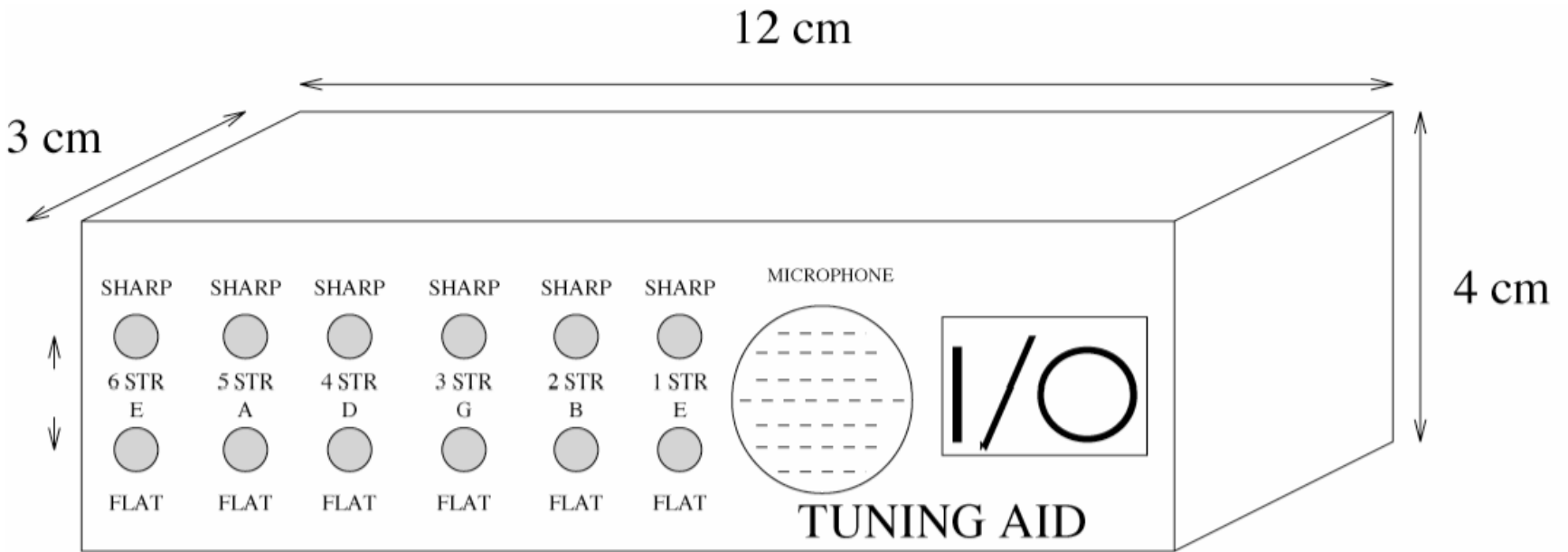
**Power  
Requirements**

**High  
Quality  
Look**

**High Tec  
Display &  
Advanced User  
Features**

Again,  
there is help in the appendix:  
Guitar Tuner

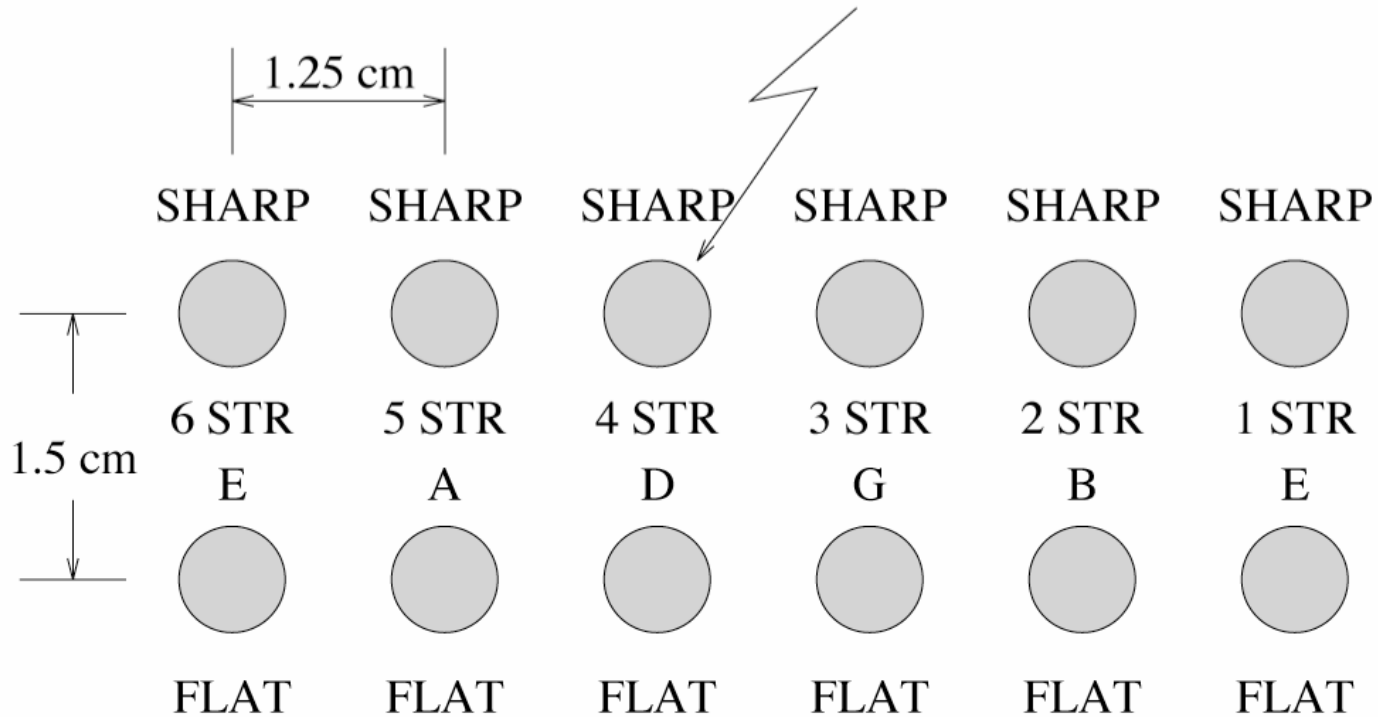
Use the guitar tuner case study as a  
model for your Req Spec



AGMC's CONCEPTION OF FINISHED UNIT

LEDs are to be brand zzz or equivalent

The energizing current must be between 10 and 20 ma



FACE PLATE SPECIFICATION

Further preparations...

1. Search out expert sources

Further preparations...

2. Analyze similar designs

Further preparations...

3. Conduct tests or experiments

# Req Spec organization:

- Background
- The Deliverables
- Special Restrictions
- Principle of Operation
- User Interface
- Input
- Output
- The [draft] User's Manual
- Acceptable Tests
  - .. For tuning accuracy
  - .. For LEDs
- Product Cost
- Dispute Resolution Mechanism

# The assignment:

- The Requirements Specification
  - Refer to Chap. 3 and Appendix A
- Deadline: posted on web site, next week (Th 29 Sept 2005)

What comes after the  
Requirements Specification?

