



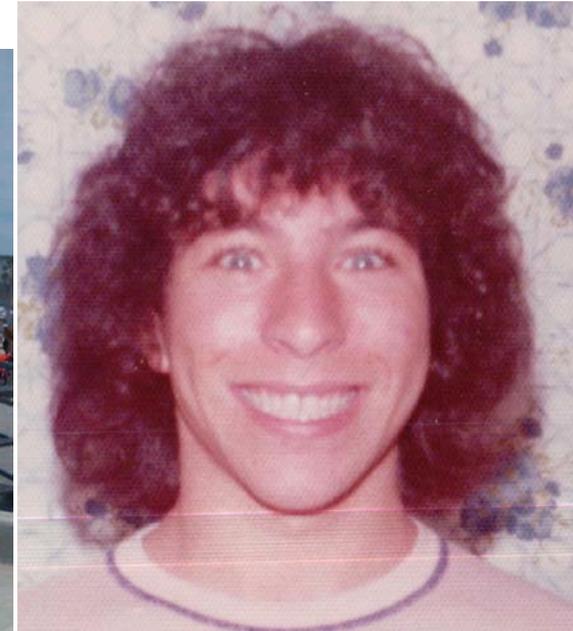
Quality Design In Electronics Manufacturing  
Consumer Versus Professional Products  
Presented By Perry Goldstein



# Who's this Perry Goldstein guy?



## Perry Goldstein Bio



It's All About Me!



- Director Of Sales & Marketing
- Product Development Committee
- Marshall Electronics
  - Broadcast monitors
  - Ip cameras
  - Specialty lenses
- MXL Microphones
  - Mics for all occasions
- Mogami Cable
  - The cable of the pros



I am a .....

born salesman

I Sell What You Build!!!



Started consumer electronics career in 1978



# Panasonic

ideas for life

23 Years  
Consumer electronics division



## Marshall Electronics Pro A/V 4 Years





Quality Means More Than Building A Product To Last  
It Means Building It To Work For Its Intended Use

- Bakes a cake
- Makes rice
- Defrosts
- 24 different heat settings
- Browns food
- Crisps food
- Timer cooking
- A zillion other features



## Consumer Electronics Lifecycle

Obsolescence is based on the following criteria

New Features

New Cosmetics

New Technologies

Marketing Lifecycle

## Professional Electronics Lifecycle

Obsolescence is based on the following criteria

New Features

New Technologies

Long term lifecycle is desirable

MOST CONSUMER ELECTRONICS CAN LAST 25 YEARS +



1971 Panasonic Stereo System  
Still in operation today

## Case Study #1

USB desk microphone used for medical dictation



## A Tale Of Two Mics



## A Tale Of Two Mics



All metal chassis  
Large electret capsule  
Low noise PCB  
\$79.95

Plastic chassis  
Low cost mic capsule  
Low cost PCB  
\$29.95



## A Tale Of Two Mics



## Case Study #2

### USB Web Chat Mic For Conference Rooms



Can you hear me now?



## Can you hear me now?



- 3 capsule design
- Table mic
- All metal chassis
- Wide range pick up
- \$99.95



- Camera and mic in same chassis
- Small single capsule mic
- Mic resides on top of TV
- \$99.95



- Table top mic
- Single capsule
- Short range pick up
- Plastic chassis
- \$79.95





**ISQED**  
Symposium 2013

## In Closing.....

- Used in the intended application, many electronics will last 25+ years, consumer or professional
- Desired outcome must be identified before design
  - Marketing must be consulted during design phase
- Desired outcome must be identified before purchase, especially in commercial/industrial environments

Questions....





Contact me;

Perry A Goldstein LinkedIn Profile  
perry.goldstein@gmail.com