

# SCHIPPERS & Crew, Inc.

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E L E C T R O N I C S M A N U F A C T U R I N G S E R V I C E S

## Schippers & Crew awaits you at Northcon Show, March 24-25, 2004; Meydenbauer Center in Bellevue.

Northcon is the Pacific Northwest's leading electronics exhibition and conference - an event where engineers and purchasers come to see and learn about new products and services. There will be product demonstrations, vendor exhibits and a conference program covering various topics for your entire design, manufacturing and test team. Visit [www.northcon.org](http://www.northcon.org) for detailed information.

This year the Northcon show is at the Meydenbauer Center in Bellevue.  
Hours: Wednesday March 24: 9:30-4:00  
Thursday March 25: 9:30-3:00.

The show is co-located with the AMCON (American Contract Manufacturers) show. For more information on Amcon see [www.amconshows.com](http://www.amconshows.com).

Come see Schippers & Crew at booth # 425 to meet & talk with us, bring questions about your assemblies, sample our candy bowl and take home a new friend.

See you there!

Bert, Paul, Al, & Vicki



Vicki, Paul & Bert at Northcon

## Lead-Free: More Than Just An Industry Trend

You may or may not have heard about the lead-free movements in the electronics industry. Well, these are more than just a trend... Beginning July 1, 2006, no products containing lead (and several other toxic materials) will be allowed for sale in the European Union.

What does this mean for OEMs and EMS providers? Unfortunately, it's not just a matter of using a different solder alloy and processes. Lead is used in many components and in fabrication of circuit boards. Components and board finish materials will need to be defined as lead-free. Many of the lead-free solder alloys have higher melting points than regular SN63 (63% Tin & 37% Lead) solder. This means assemblies will be subjected to higher temperatures during reflow and soldering operations.

Stay tuned for our next newsletter - we'll follow up this introduction with a more detailed article on the subject. In the meantime, visit our website at [www.schippers.com](http://www.schippers.com) for links to the European Union Directives and other information.

Bert Schippers  
Schippers & Crew, Inc.

# Infrequently Answered Questions

Q: Why do men's clothes have buttons on the right while women's clothes have buttons on the left?

A: When buttons were invented, they were very expensive and worn primarily by the rich. Because wealthy women were dressed by maids dressmakers put the buttons on the maid's right. Since most people are right-handed, it is easier to push buttons on the right through holes on the left. And that's where women's buttons have remained since.

Q: Why do ships and aircraft in trouble use "mayday" as their call for help?

A: This comes from the French word m'aidez – meaning "help me" – and is pronounced "mayday".



Q: Why is someone who is feeling great "on cloud nine"?

A: Types of clouds are numbered according to the altitudes they attain, with nine being the highest cloud. If

someone is said to be on cloud nine, that person is floating well above worldly cares.

Q: Why are many coin banks shaped like pigs?

A: Long ago, dishes and cookware in Europe were made of a dense, orange clay called "pygg". When people saved coins in jars made of clay, the jars became known as "pygg banks." When an English potter misunderstood the word, he made a bank that resembled a pig. And, it caught on.

Q: Why are they called "Caddies"?

A: When Mary, later Queen of Scots, went to France as a young girl (for education and survival), Louis, King of France learned that she loved the Scot game "golf." So he had the first golf course outside of Scotland built for her enjoyment. To make sure she was properly chaperoned (and

guarded) while she played, Louis hired cadets from a military school to accompany her. Mary liked this a lot and when she returned to Scotland (not a very good idea in the long run), she took the practice with her. In French the word "cadet" is pronounced 'ca-day' and the Scots changed it into "caddie."



## Schippers & Crew visits APEX show in Anaheim, CA.

APEX is the industry show for everyone who designs, manufactures, assembles and tests PCBs and Electronics Assemblies. Since we are intimately involved with the assembly of electronics, this is always an informative show for us. Al Schmidt attended conferences on technology changes coming up in the industry, and Bert Schippers attended a program specifically for managers in the EMS industry.



Some of the things we learned will be covered in articles in this and future newsletters. We saw equipment vendors for our existing equipment, and of course reviewed possible future equipment purchases. For more data on this show, you can visit [www.goapex.org](http://www.goapex.org).

## Don't Argue with Children!!

- A little girl was talking to her teacher about whales. The teacher said it was physically impossible for a whale to swallow a human because even though it was a very large mammal its throat was very small.

The little girl stated that Jonah was swallowed by a whale. Irritated, the teacher reiterated that a whale could not swallow a human; it was physically impossible. The little girl said, "When I get to heaven I will ask Jonah".

The teacher asked, "What if Jonah went to hell?"

The little girl replied, "Then you ask him".

- One day a little girl was sitting and watching her mother do the dishes at the kitchen sink. She suddenly noticed that her mother had several strands of white hair sticking out in contrast on her brunette head. She looked at her mother and inquisitively asked, "Why are some of your hairs white, Mum?"

Her mother replied, "Well, every time that you do something wrong and make me cry or unhappy, one of my hairs turns white." The little girl thought about this revelation for a while and then said, "Momma, how come ALL of grandma's hairs are white?"

- A teacher was giving a lesson on the circulation of the blood. Trying to make the matter clearer, she said, "Now class, if I stood on my head, the blood, as you know, would run into it, and I would turn red.

"Yes," the class said.

"Then why is it that while I am standing upright in the ordinary position the blood doesn't run into my feet?"

A little fellow shouted, "Cause your feet ain't empty."



## Schippers & Crew to Host Test Seminar

Here's an opportunity to become more familiar with the test technologies & services available to complement your outsourcing requirements. Bring all of your test related questions and they'll get addressed.

### To be covered:

- Selecting a test strategy
- Design for Test
- Designing & implementing In Circuit Test (ICT)
- Designing & implementing functional & bench testing
- Examples of successful & unsuccessful test implementations
- Q & A session on Manufacturing & Design for Manufacturing

The seminar will include a tour of our facility.

**Who should attend:** designers, test engineers, quality and outsourcing personnel, or anyone who wants to successfully outsource electronics assembly & test.



*Schippers & Crew Test Engineer, Jack Barke*

**When:** Wednesday, April 14th, 10:00 - 2:00PM (box lunch provided).

**Where:** Schippers & Crew Conference Room.

RSVP by April 7th to [jack@schippers.com](mailto:jack@schippers.com).

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*Don't Argue  
with Children!  
See inside . . .*

**Bring ALL of Your Assemblies to...**

## **Schippers & Crew, Inc.**

For or information on the following services:

- **SMT and Thru-hole Assembly**
- **Turnkey and Consigned Services**
- **BGA Assembly and Rework**
- **DFM Assistance**
- **Cable Assembly**
- **Goldfinger Repair**
- **Box Build & Mechanical Assembly**
- **Test and Test Dev. (HP3070 Platform)**

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See our website for more info: www.schippers.com

**Free pick up and delivery  
in the greater  
Puget Sound area!**

