

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

Customer and Vendor Appreciation Day a Success!

Over 80 guests joined us for our biggest ever open house!

Delicious and plentiful food was provided by Twelve Baskets Catering. Pastries from *Larsens Bakery* and an ice cream sundae bar using Bert's new soft-serve machine rounded out the menu.

Attendees were given tours of the shop including equipment demonstrations and were able to see the processes required to build quality electronics assemblies.



Steve Welch of Marc Technologies retrieves his prize - dinner for two at Teatro Zinzanni's! He said, "I've never won anything in my life!"



Bert's soft-serve ice cream machine a hit with customers and staff!!

Everyone took home a new "pet" - their choice of mascot cradled in a Schippers & Crew mug. Later the lucky door prize winner was drawn. Steve Welch won dinner for two at Teatro Zinzanni's!

If you missed the open house, call now to schedule your own personal tour and to take home your mug and mascot. If it's a Friday afternoon there's a good chance you'll get to try out Bert's soft-serve ice cream!

Customer Spotlight

Schippers & Crew recently spoke with Mike Achey, a Test Engineer at Microscan Inc. about the role of testing in circuit-board outsourcing.

Schippers: Mike, Microscan outsources the assembly & test of its circuit boards and you've had quite a bit of experience dealing with different suppliers like Schippers & Crew. How important is Testing of the circuit boards to the overall picture?

Mike: Test is very important. Both the design of the test and the care taken in testing the actual boards is important to us. The design is a cooperative effort between us and the supplier and I can say we've been really pleased with how that relationship has worked out with Schippers.



Mike Achey
Test Engineer, Microscan Inc.

When it comes to delivery of tested boards, we expect them to work of course. And when they don't it's a significant impact. It costs us money and it costs the supplier money when we have to return boards. What's most important to us is that when it happens we get effective corrective action and keep making progress at improving our yields.

Schippers: Can you think of an example of that?

Mike: Well, for instance, something like orientation of connectors that electrical testing doesn't screen. It can occasionally get through the visual inspection process. But with Schippers' AOI system, that problem is prevented.

Schippers: Thanks Mike.

Mike: You're welcome.

Tough Trivia Test

Think you're good at Trivia? Let's see where you rate:

- 2-2 Trivia Novice
- 5-5 Trivia Buff
- 8-8 Trivia Whiz
- 10-10 Trivia Master

- 1) How long did the Hundred Years War last?
- 2) Which country makes Panama hats?
- 3) From which animal do we get catgut?
- 4) In which month do Russians celebrate the October Revolution?
- 5) What is a camel hairbrush made of?
- 6) The Canary Islands in the Pacific are named after what animal?
- 7) What was King George VI's first name?
- 8) What color is a purple finch?
- 9) Where are Chinese gooseberries from?
- 10) What is the color of the black box in a commercial airplane?

All done? Check your answers below!

Job Search Tips!

Vicki Palmer
Personnel Manager

In this age of the Internet, even searching for jobs has gone on-line. E-mail is one of the most convenient ways for people to submit their résumés to potential employers. But just like an in-person interview, the first impression is all-important. The first thing noticed about an e-mailed résumé is the sender's name. Below are some actual e-mail sender names I've seen with résumés in my in-box. (The last part of the e-mail address has been omitted to reduce their embarrassment.)

rob_slob
Snerd69
wild_mann
HknUpTheMt
puppy poo

The dopest guy ever...
Toolfanatic
EnvyDaTruth
Chuckwagon59
Honey122302
Loki (*the Norse god of mischief*)

And finally, do you really want a potential employer to see that you are Hye4life?

On the lighter side . . .

One Sunday morning, a priest wakes up and decides to go golfing. He calls his boss and says that he feels very sick, and won't be able to go to work.

Way up in heaven, Saint Peter sees all this and asks God, "Are you really going to let him get away with this?"

"No, I guess not," says God.

The priest drives about five to six hours away, so he doesn't bump into anyone he knows. The golf course is empty when he gets there. So he takes his first swing, drives the ball 495 yards away and gets a hole in one.

Saint Peter watches in disbelief and asks, "Why did you let him do that?"

To this God says, "Who's he going to tell?"

A doctor and a lawyer were talking at a party. Their conversation was constantly interrupted by people describing their ailments and asking the doctor for free medical advice. After an hour of this, the exasperated doctor asked the lawyer, "What do you do to stop people from asking you for legal advice when you're out of the office?"

"I give it to them," replied the lawyer, "and then I send them a bill."

The doctor was shocked, but agreed to give it a try. The next day, still feeling slightly guilty, the doctor prepared the bills. When he went to place them in his mailbox, he found a bill from the lawyer.

Baloney!

A student sat for an hour during a college exam, doing nothing. Finally the professor asked him what he was doing. The student said, "I looked at all the notes for the class and boiled them down to one page. I condensed the page to one paragraph. I abstracted the one paragraph down to one sentence. Then I summed up the sentence in one word. But I forgot the word."

The professor thundered, "That's baloney!"

The student jumped up excitedly, "That's the word!"

****You can win a \$10 coffee card if you are the first person to e-mail paul@schippers.com with the correct spelling of the word "baloney" and where it came from.**

Answers to trivia test

- 1) The Hundred Years War lasted 116 Years.
- 2) Ecuador makes Panama hats.
- 3) We get catgut from Sheep and Horses.
- 4) The Russians celebrate the October Revolution in November.
- 5) A camel hairbrush is made of Squirrel fur.
- 6) The Canary Islands in the Pacific are named after Dogs.
- 7) King George VI's first name was Albert.
- 8) A purple finch is Crimson.
- 9) Chinese gooseberries come from New Zealand.
- 10) The black box in a commercial airplane is Orange, of course. . .

SCHIPPERS & CREW PROVIDES DESIGN FOR MANUFACTURE

What is DFM?

- a) A way to make your job easier?
- b) A way to make our job easier?
- c) A way to make the end user happier?
- d) All of the above.

DFM--Design for Manufacture -- is all of the above.

Your job becomes easier because you get the results faster, without sudden needs for engineering changes to get around a situation that comes up during the assembly process. You also save costs because you don't need to pay for added design and engineering after the fact, and increased manufacturing time to handle a change.

A simple example of this is the perimeter needed at the sides of a panelized board so that it can be held in the various machine lines as it goes through different processes. You already

know this one of course--see, you already are mastering the concept of DFM!

Here at Schippers & Crew our job becomes easier because we don't have to solve problems that are built into the design of the board. Special fixturing to hold assemblies and tricky soldering procedures are just two examples of things that add time and cost, which usually can be avoided with a DFM check.

The end user is happier because the product is more reliable. And of course, having a satisfied customer makes the manufacturer happy too.

Schippers & Crew offers two DFM services. We are happy to give input on things as we see them or when requested. We also offer a thorough design review at an hourly rate. Call Paul at 206-782-2325 to get started.

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*Door Prize
Winner!
See inside . . .*

Need Help? Call Schippers & Crew

for quotes 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 Development (HP3070 Platform)**

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