The Quality Mark

The Newsletter for the Kitchener-Waterloo Software Quality Association

The Year in Review

By Mechelle Gittens, President KWSQA

And so we've come to the end of another year of meetings for the Kitchener Waterloo Software Quality Association. The executive and I would like to thank all of you for your participation in the group. We would especially like to thank Linda Botzang, Cameron Curwood, Jérôme Lang, and Chris Mintz who went the extra mile and offered their knowledge to us in informative presentations. Our appreciation is also extended to the companies that sponsored meetings this year – Waterloo Maple Inc, Research In Motion Ltd, Open Text Corp., Mitra Imaging Inc, CacheFlow Inc, Xign Corp., Spicer Corp./PrinterOn, Inscriber Technologies, and Mortice Kern Systems Inc.

This year we set out to offer practical sessions for our membership, where we would learn concepts and methods that we could use in our professional software quality lives. Based on a suggestion by our then Vice President Janet Kennedy, we attacked this challenge by breaking our tasks down using a 4-D strategy – **D**efine, **D**esign, **D**evelop, **D**eploy. We exercised the strategy by having speakers on: Defining a Test Strategy using Operational Profiles, Designing and Developing a Web-Test Strategy, Test Management, Defect Tracking, and Beta Testing. Some of these approaches were familiar to us; others allowed us to see how we could augment our own processes; while others helped us to look forward to the possibilities.
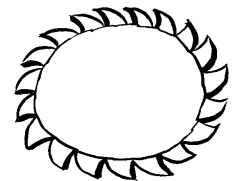
We also looked at career development this year. We invited a former President of the local chapter of the American Society for Quality, Denis Devos, to come in and tell us what ASQ has to offer. Our own KWSQA members also shared their experiences of the benefits of membership in ASQ, as well as other organizations such as the Quality Assurance Institute (QAI), and the International Institute for Software Testing (IIST). And finally, we invited Prof. J. Michael Bennett of the Dept. of Software Engineering, University of Western Ontario, to come in and give us an overview of the recognized body of knowledge for software quality.

We had a good year and have achieved most if not all of our goals. I would like to thank my executive: Marcela Prichici and Sarah Jones who organized meetings and kept our books in order; and Paul Carvalho and Jack Van Ham who worked extremely hard to give us The Quality Mark newsletter and an up-to-date information-packed website!
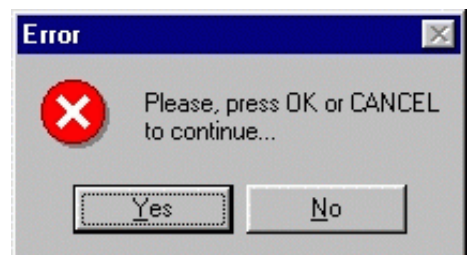
Let us each take the advice of Dwayne O. Andreas [*see Quotes next page – Ed.*] and look towards the next year with thoughts of success, growth and further development. Have a great summer. See you all in September.   *TQM*

WHAT'S INSIDE...

Error

Please, press OK or CANCEL to continue...

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Quality Article

SAY WHAT?
By Rosalind Mountford

Improving one's communication skills is a not only a good investment in one's future but also a key element in daily QA routine. Perhaps the single most important skill a person can develop is the ability to communicate effectively with others. Only through effective interpersonal communication can one persuasively convey an idea, overcome objections, avoid misunderstandings, and minimize arguments.

Guess what causes most of the "problems" in relationships, either in the workplace or personal? Eighty percent are not really problems – they are misunderstandings. What kind of commentary is that on our ability to communicate? Think about it – 80 percent of the time there is no problem; we are just not understanding each other.

We have a lot of words and phrases that can be very misleading. Use of these words and phrases can lead to low-quality communication. For example, "big problems" or "budget overrun" can mean different things to different people.

Philosophy of Good Communication:

The philosophy for being a good communicator is very simple:

1. Assume 100 percent of the responsibility for understanding what the other person is saying and means.
2. Assume 100 percent of the responsibility for making sure that the person you are communicating with understands you.

If you have two people assuming 100 percent responsibility for understanding and being understood, extremely effective communication will occur. However, most people do not take the time to make sure they are understood or that they understand.

Mastering the Fundamentals:

The key to mastering any skill, communication or otherwise, requires understanding and grasping the basics or the fundamentals. There are two very important aspects of communicating that must be considered:

1. Content
2. Process

Content deals with *what* you are communicating. Process deals with *how* you are communicating. It is important to know that process will pre-empt content.

For example, the *way* a question is answered can make a significant difference. One way a question can be answered is, "Hmm, that's an interesting question," and then given a thoughtful and considered response. Another way the question can be answered is with a sneer. Without saying a word, the attitude of "How could you ask such a stupid question" is conveyed.

We are all guilty of not paying attention at one point or another to our method of communication, but if we are to improve that needs to change. One book that provides further information and details on how to become a more effective communicator is "So, What's Your Point?" by James Wetherbe.[†] The book is written in a light-hearted fashion and has many humorous anecdotes.

Building your "soft skills" is a difficult but rewarding challenge. Developing and improving the process of both verbal and non-verbal communications will lead to effective interpersonal communication, a key to success.

[†] Wetherbe, James C. and M.B. "So, What's Your Point?" 1993. Mead Publishing. ISBN 1-883096-00-6

TQM

The Dr. Seuss Computer Manual

If a packet hits a pocket on a socket on a port,
And the bus is interrupted as a very last resort,
And the address of the memory makes your floppy disk abort,
Then the socket packet pocket has an error to report!

If your cursor finds a menu item followed by a dash,
And the double-clicking icons put your window in the trash,
And your data is corrupted 'cause the index doesn't hash,
Then your situation's hopeless, and your system's gonna crash!

If the label on your cable on the gable at your house,
Says the network is connected to the button on your mouse,
But your packets want to tunnel to another protocol,
That's repeatedly rejected by the printer down the hall.

And your screen is all distorted by the side effects of gauss,
So your icons in the window are as wavy as a souse,
Then you may as well reboot and go out with a bang,
'Cause as sure as I'm a poet, the sucker's gonna hang!

When the copy of your floppy's getting sloppy on the disk,
And the micro code instructions cause unnecessary RISC,
Then you have to flash your memory and you'll want to RAM your ROM,
Quickly turn off the computer and be sure to tell your mom!

TQM

TIPS & TRICKS

Have useful advice to share with your peers? Have a question that you need answered? Susie QA is here for you. She will try to provide you with useful suggestions on how to make your job easier. Please send your questions and useful tips to us at news@kwsqa.org.

Q: I keep being asked about testing for Memory leaks. Can you please explain to me more on Memory leaks? How to measure it? Are there any tools to help?

A: A memory leak is typically the failure of an application, or system component, in releasing resources allocated for a process. For example, if a programmer declares a fixed size array for 10 strings, each 256 bytes, fills the array and completes the job the function needed, but does not explicitly de-allocate or free that memory, then 2560 bytes (and some overhead) of RAM are no longer available in the pool for any other process, until forcibly cleared.

Types to watch for:

- System calls, including applications that rely on system libraries. Affects RAM. Can affect swap file. Requires machine reboot typically for Windows. Bad, very bad.
- Application calls, including called functions of specific resource types on the stack. Application must be closed before resources are released. Can also include swap files. Bad.

Classic symptoms that your Application Under Test has a memory leak include: system performance starts to degrade, swap file grows to enormous proportions, windows don't pop-up when they should, and standard application features/functions may fail to work as before. Sometimes, these behaviours are only observable when the AUT has been running consistently for several days up to a few weeks, so be sure to include endurance or stress tests in your test plans. Other times, especially with early prototypes or alpha builds, it may only take a few hours before your system comes to a halt.

Some tools exist to help you identify memory leaks, but they are generally geared towards developers. They include such products as: BoundsChecker (Compuware NuMega), Insure (Parasoft), Purify and Quantify (Rational), and PC-Lint (Gimpel). These are all great tools, but they share two drawbacks:

1. If you don't have a test case that will exercise the path in your code that causes a particular memory leak, these tools will not find it.
2. If you happen to be on a platform (e.g. in the case of embedded software) that is not supported by a tool, you can't use it to find memory leaks.

This is where it might be helpful to *inspect* the source code for memory leaks. Developers can do this manually, by looking at each allocation and figuring out whether the memory will eventually be returned to the system. If you have a good development process in place, most of these types of problems will be caught during the Unit testing phase.

So what can you do during System testing to check for memory leaks? Well, if you are testing on any Windows NT or 2000 platform, you can use the Task Manager or Performance Monitor to take *memory snapshots* while you test.

For example, use the Performance Monitor to take readings of the application process of interest in units of Megabytes every hour. Label the first reading M0, and continue with M1, M2, etc, while you continue to test the rest of the AUT or run some load testing scripts. If there is a memory leak, you will see these counters going up. After about 8 hours or so, quantify the leak using a formula like this: $[(M8-M0)/8]$ MB/hour.

For other platforms, talk to your developers to find out how you can monitor specific processes for memory leaks. If you identify a potential problem, then narrow down the focus/process and report it using your defect tracking system. You can take it from there.

Q. Do you know any Keyboard shortcuts for Microsoft Excel?

A. Sure thing! Check out the chart below…

|	
Edit current cell	[F2]
Insert Current Date	[Ctrl]+ [;]
Insert Current Time	[Ctrl]+[Shift]+ [;]
Hide a row	[Ctrl]+ [9]
Hide a column	[Ctrl]+ [0]
Unhide row	[Ctrl]+[Shift]+ (
Unhide column	[Ctrl]+[Shift]+)
Insert Row or Column	Select Row or Column heading, Press [Ctrl]+ [+]
Go to a specific cell	[F5]
Spelling	[F7]
Calculate a column or row (SUM)	[Alt]+ [=]
Highlight entire spreadsheet	[Ctrl]+ [A]
Quick Format	[Ctrl]+ [1]
Apply general number formatting	[Ctrl]+[Shift]+ [~]
Move forward and backward through sheets in the current workbook	[Ctrl]+ [PgDn] and [Ctrl]+ [PgUp]

TQM

RESOURCES ON THE W^3

Site	Strengths
QACity.Com: http://www.QACity.com/	"Organized resources for busy testers." Developed to organize the best resources on the Web for busy testers, QACity.Com is designed to be the tester's interface to the Internet for testing related information.
SQAtester.com: http://www.SQAtester.com/	"Your online Software Testing and Resource Center ." You can find software testing references, see examples, catch up on industry news and learn more about SQA in general.
Einfopark: http://www.einfopark.com/	"A Quality Site on Software Quality Assurance." You can sharpen your quality concepts, get useful downloads, links to useful tools, a discussion board, and more. Annoying pop-up ads, but good content.
Webopedia: http://www.webopedia.com/	Online computer dictionary and search engine for Internet terms and Technical Support.

Droodles

Is it a doodle riddle or a riddle doodle? Take your best shot at the following droodles. Suggested answers may be found elsewhere in this issue. Good Luck!

1.

2.

3.

4.
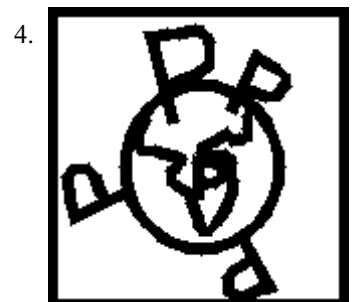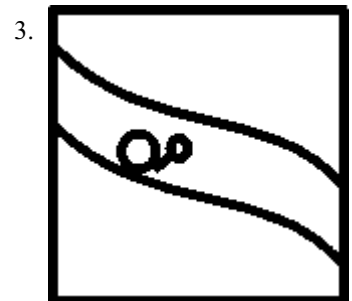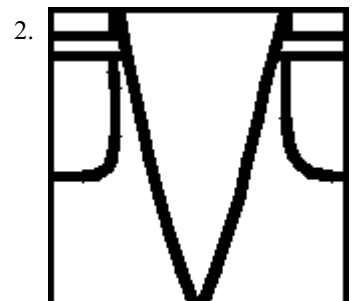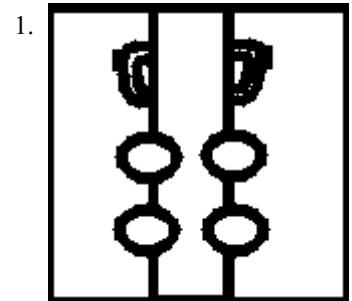
FUN with UNIX

If you type these in from the csh (c shell) in Unix you really do get these responses.

```
% make love

Make: Don't know how
to make love. Stop.


% got a light?
No match.


% sleep with me
bad character


% man: Why did you
get a divorce?

man: Too many
arguments.


% make 'heads or
tails of all this'

Make: Don't know how
to make heads or
tails of all this.
Stop.


% make sense

Make: Don't know how
to make sense. Stop.


% \(-

(-: Command not
found.
```
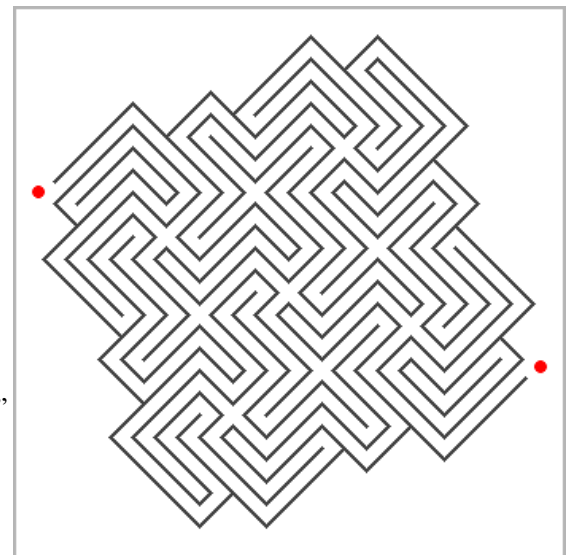
QUIZZES & CHALLENGES

☆ = Very Easy, ☆☆ = Easy, ☆☆☆ = Average, ☆☆☆☆ = Difficult

Solutions to these problems will appear in the next issue. Enjoy!

1. Crossroads Maze   ☆

There are nine crossroads from dot to dot.

2. ALGRAMARA   ☆☆

In another galaxy, a certain nation of creatures speaks a language known as Algramara. In this language, "harvec tood zevac" means "my tooth hurts," "lavec lina zevac" means "my delicious food," and "zevac corma lina" means "eating my food."

What does "corma harvec zevac tood" mean?
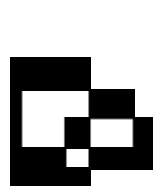
3. Changing a Light Bulb   ☆☆☆

In your cellar there are three light switches in the OFF position.

Each switch controls 1 of 3 light bulbs on floor above. You may move any of the switches but you may only go upstairs to inspect the bulbs one time.
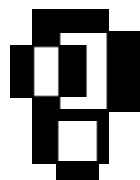
How can you determine the switch for each bulb with one inspection?

4. Odd One Out   ☆☆☆
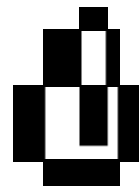
Which is the odd one out?
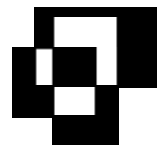
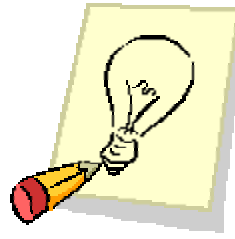a   b   c   d

Solutions to Last Issue's Challenges

1. Time Travel

Three days and two nights.
She left yesterday and will return tomorrow.

2. To Get to the Other Side

0%. C must always be false, because it is impossible for A & B to both be false AND C to be true. If C is false, B is also false.

3. A Quick Reading Test

There are six F's in the sentence.

The average person finds three of them.

- If you spotted four, you're above average.
- If you got five - pretty impressive!
- If you caught six, you are a genius!

> Finished Files are the result oF years oF scientiFic study combined with the experience oF years.

4. A Hat Trick

The man who calls out is C.

After a short time, D has not shouted out what colour hat he is wearing. Because of this, C knows that he cannot be wearing the same colour hat as the person in front of him. If he were then D would see two white hats and would therefore know that his hat must be black.

Armed with the knowledge that (1) he isn't wearing the same colour hat as the man in front, and (2) the man in front is wearing a white hat, C can confidently shout out that the hat he is wearing is black.

KWSQA Corner – Contact Information for 2000-2001

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Subscribe to the KWSQA Mailing list for FREE! Check out:
http://groups.yahoo.com/group/kwsqa/

YAHOO! Groups

Paranoia & Computers

About a year ago, a customer from Roswell, NM, called in to place an order. To break the ice, I jokingly asked if he or any of his neighbours had seen any aliens lately. The guy laughed and proceeded to tell me all about the crazies (his word, not mine) that not only live in Roswell but who come on vacation there in hopes of seeing a UFO themselves. As he talked, I processed the order, and the last bit of information I needed to complete it was the guy's email address for marketing purposes.

Customer: "Email! I won't have anything to do with that Internet or modems of any sort! You should be careful about those. Don't you know that once you install a modem, the government can look into your computer and watch everything you do? That's why every night before I go to bed, I turn the monitor to the wall."

Droodle Answers

These are the suggested answers, but you can submit your own!

> 4. P's on Earth
>
> 3. White blood cell searching in vein
>
> 2. Closeup of Count Dracula flossing
>
> 1. A koala pretending to be a young Elton John hanging on to a tree trunk

Got a good droodle? Send it to us at news@kwsqa.org

Mark Your Calendar

For updates, visit: http://www.kwsqa.org/

- The KWSQA Meetings occur on the last Wednesday of each month (except for July, August and December), and are usually held in the Communitech building on King Street in Waterloo.
- Meeting details are announced via the Yahoo!Groups mailing list and the KWSQA web site.
- The KWSQA calendar year runs from August 1 to July 31 of the following year.

JUNE

8 – STC General Meeting (Year-End Picnic BBQ)

17 – *Father's Day*

23-24 – Multicultural Festival (Victoria Park)

26 – TASSQ Dinner Meeting (Test Management in a Web Year)

27 – **KWSQA General Meeting** (Elections for 2001-2002)

JULY

1 – *Canada Day*

8, 15, 22, 29 – Sunday Band Concerts in the Park (Waterloo Park Bandshell)

12-14 – Uptown Waterloo Jazz Festival

13-29 – Elora Festival – A Celebration in Song (Elora, ON)

21 – Waterloo Dragon Boat Festival (Laurel Creek Conservation Area)

27-30 – Collingwood Elvis Festival (Collingwood, ON)

AUGUST

5, 12, 19 – Sunday Band Concerts in the Park (Waterloo Park Bandshell)

6 – *Civic Holiday*

10-12 – Fergus Scottish Festival and Highland Games (Fergus, ON)

11 – KidsPark! (Victoria Park)

22-26 – Waterloo Busker Carnival

For more information on the above events, check out their corresponding web sites below.

Local (KW) community events:
- Kitchener-Waterloo Tourism – http://www.kw-visitor.on.ca/
- City of Waterloo – http://www.city.waterloo.on.ca/
- Elora Festival – http://www.elorafestival.com/
- Waterloo Dragon Boat Festival – http://www.waterloodragonboat.com/
- Collingwood Elvis Festival – http://www.collingwood.net/elvis/
- Fergus Scottish Festival – http://www.fergusscottishfestival.com/
- Waterloo Busker Carnival – http://www.waterloo-buskers.com/

Hi-Tech and other Professional-related events:
- Communitech seminars – http://www.communitech.org/
- Society for Technical Communication (STC) – http://www.stc.waterloo.on.ca/
- ASQ Kitchener Section – http://www.asqkitchener.com/
- TASSQ events (in Toronto) – http://www.tassq.org/