

Black Box Software Testing

(Professional Seminar)

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Section:35

Career Planning for Testers

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Career Planning for Testers

Tracks within testing:

- Technical
 - » Automation programmer
 - » Automation architect
 - » Systems analyst
 - » User interface / human factors analyst / critic
 - » Test planner
 - » Subject matter expert
 - » Black box tester
- Management
 - » Test lead, manager, director, internal consultant, external consultant
- Process management
 - » Metrics
 - » Software process improvement specialist

Certification of Testers

Several organizations will now give you “certification” in software testing or software quality, including the American Society for Quality, the Quality Assurance Institute and the British Computer Society.

Should you be certified?

Training / studying for certification may or may not train you in skills useful to your work. However, a certificate is a clear statement that you care about your role in the profession.

In a tight market, such a certificate might improve your chances of getting a job. I think that additional courses in programming or work samples that show you have used test automation tools (download a demo version and write your own tests if necessary) are more likely to get you a good position.

Career Planning for Testers

Tracks outside of testing (for example):

- Programming
- Program management
- Marketing
- Technical support
- Documentation
- Sales
- Field support
- Human factors analyst
- Systems analyst

Career Planning for Testers

Tracks outside of testing

- **People move back and forth between other fields and testing. This doesn't happen by accident. One way to prepare to move to another field is by picking tasks within testing that will educate you in tasks that are performed in that other field.**
- **Management of multiple areas (e.g. testing and something else) can lead to much more senior management positions. Multi-functional managers are often paid much better (along with promotion faster) than managers of single areas.**

Career Planning for Testers: Bodies of Knowledge

Based on the American Society for Quality Control's *Body of Knowledge for the Certified Software Quality Engineer*, Software Testing Laboratories developed three useful documents for describing the role of testers in a black box testing organization:

- The *STL Body of Knowledge* describes the knowledge that they expect their staff to possess.
- The *STL Job Ladder* is an overview of the knowledge and skill of different levels of testing staff. The “Lead Track” is the track of someone headed toward management. The “Engineer Track” is the career track of an increasingly senior technical contributor.
- The *STL Body of Knowledge Map* relates the knowledge areas in the Body of Knowledge to the seniority levels in the STL Job Ladder.

Career Planning for Testers: Bodies of Knowledge

The two bodies of knowledge are quite different. Both list the knowledge areas that they expect of a senior person in the field, but ST Labs' was developed by and for their testers, whereas ASQ's development was dominated by process improvement specialists from (or who consult to) large corporations, and includes relatively little on testing.

The ST Labs approach is useful in several ways:

- You can work with your staff to plan their advancement as testers. (Look for assignments that will grow their skills / knowledge in desired ways).
- You can work with candidates and hires who intend to stay in testing only for a fixed time (say, a year or 18 months). They're coming to you with a plan to move to programming, tech support, marketing, writing, something. You can review with them what they can work on within testing that will help them get and then do well in that next job.

Job Seeking in an Expanding Market

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These slides were written in 1999 and early 2000 when the market was at its peak. Some of the advice is dated now that the market has changed, but much of it is still current, you just have to look harder for the right position.

Factors to Consider

- What are your responsibilities to your current employer?
- What will make you happy?
- How much money?
- What about stock and benefits?
- What should your resume look like?
- How much should you stretch the truth?
- How do you build a reputation?
- Where can you find out about jobs?
- How should you manage recruiters?
- How can you learn about a company?
- How can you look good in an interview?
- How do you *prepare* to negotiate?
- How do you negotiate?
- Dealing with race, gender, age, etc.
- How do you set yourself up for success on the job?

Responsibilities to Your Current Employer

Loyalty?

- Many employers are trying to appeal to the loyalty of their staff, to keep them from leaving.
- Pardon my cynicism, but many of the same people bragged about controlling costs with layoffs when the market was tighter.
- There are exceptions, such as Hewlett-Packard and IBM, that undertake a strong sense of long-term responsibility to their staff. You might reasonably feel a mutual obligation to these companies.
- For the average company, if they want to appeal to your loyalty, maybe you should ask for some golden handcuffs.

More generally

- Give reasonable notice, but don't give more than your employer would give you, unless that serves other interests of yours
- Preserve secrets
- If you signed a non-compete contract, check with your lawyer
- In general, what goes around comes around

What Will Make You Happy?

Great job markets are temporary. Take advantage of it while you've got it. Now is the time to think about what will make you happy, and go for it.

- Money, stock, benefits, money
- Opportunity for specific experiences / education
- Opportunity for career growth
- Opportunity to work with exceptional people (or to be a big fish in a pond)
- Social value of your work
- Make room for your family, social life, education
- Location
- Specific allowances, support for your health
- Other special circumstances

Money

Salary surveys

- Many of these are lowball estimates
- Few of these account for software testing as a separate area
- There are several at websites like careerbuilder.com
- Take geographic differences seriously.

Practice interviews

- Interview with many companies
- In several of the interviews, try out high numbers to test the top of your market value. You'll lose credibility in some of these interviews (and thus lose the job) but you'll learn a lot for your next jobs.

Employers will typically whine about how much you are about to make, during a salary negotiation. Many will lay a trip on you even if you are asking for half of the rate they expected to pay.

Stock & Benefits

Stock

- Pre-IPO often means No-IPO.
- We hear about stock option millionaires, but most become hundredaires or thousandaires.
- Look for factors that make it credible that this company will go public in X timeframe:
 - » Profitability
 - » Consistent meeting of projections, no surprises to market
 - » Reasonably unique niche

Benefits

- The usual medical, dental, education—what is important to you?
- Think carefully about overvaluing swimming pool, fitness center, laundry room, dry cleaning pickup at your company. Also, if they offer all this at the office, where is your life?

Resume Tips

A resume *INCLUDES* and *EXCLUDES*. Your goal is to appeal to the right sub-market.

Functional vs. historical

- You need buzz words but you are at risk in a functional resume that is essentially a collection of buzz words. Interviewers need history. Screeners need buzz.

Create several resumes for different market segments

Length (1 page, 2 page, ???)

Emphasize what is special about you. Your hobby might be your strongest selling point.

Verbosity is dangerous, people will turn out.

When should you send references with your cover letter?

- You are *stretching* to a job or are seeking work in a discriminated situation. In general, include refs if they make it substantially more likely that potential employers will interview or hire you.

Resume Tips

Write your COVER LETTER to specifically respond to the ad. If it lists “requirements” then point out the ones that you meet and the ones on the list that you don’t meet but really want to learn.

Stretching the Truth?

Never stretch the truth

25% of American resumes contain false data. Don't join this 25%

Think of your manager

- Test managers are used to BS from others, and we don't like it.
- Probably completely intolerant of the false details, and probably has a well-developed BS-detector.

How Do You Build a Reputation?

Talks at local meetings

Teach classes at local universities / colleges

Go to conferences

Publish

Create a web site

The more attractive you are in the marketplace, the higher your final salary will be.

Where to Find Jobs

Newspapers

Magazines

On-line services

Internet search engines

Recruiters

Colleagues

Spam (would you work for a company that spams you?)

Managing Recruiters

They are salespeople, typically on pure commission. The more easily they think they can sell you, the more they'll work on your case.

Contact them regularly

- Be consistent in the day / time that you contact them
- Remind them of you
- Ask them of openings that have recently crossed their desk that you might be aware of.

Restrict their circulation of your resume

- You must approve all sendings of your resume. Put this restriction in writing. Refuse to deal with anyone who won't honor this.
- Don't tell them about other opportunities (or agree to tell them) (this would have you giving another recruiter's secrets to this recruiter).

Be aware of differences among recruiters

- Executive recruiters vs. general purpose recruiters vs. outplacement firm

Learn About the Company

During the search (or later)

- Read the company's web site, download demo software
- Read the SEC filing
- Deja News
- Google, askjeeves.com, northern light
- Stock sites that give investor info
- Credit report (knowx.com)
- Your peer network
-

In the phone screen

- Ask for product literature
- Ask for demo copies of software
- Ask how else to find info about the company
-

Learn About the Company

Useful questions: I ask some of these of managers and some of them of working staff. Use your judgment about who you ask what:

- What kinds of products and services does your company provide?
- Can I see a demonstration of the key product?
- What is special about your products and services? What are the key strengths and weaknesses?
- How did you develop the main product? What were the key development tradeoffs? (Time vs Features vs. Cost vs. Reliability)
- Who are your customers?
- Who are your competition?
- How do you learn about your customers?
- How do you learn about your customers' satisfaction with the overall product, with the design, and with the defects?
- Show me an organization chart (and where you are on it and where I would be on it)

Learn About the Company

- What is it like to work here?
- What do you do? What kinds of products and services do you provide?
- Can I see some examples?
- Where do you fit in the product development process?
- What do you like about your job?
- What would you like to change?
- How do you make time for your family?
- How much control do you have over your own work?
- Who designs the tests that you run? Who runs the tests that you design?
- Tell me about your test design process.
- Can I see some test plans and test cases?
- How do you feel about your pay / boss / colleagues?

Learn About the Company

- What courses or conferences did you take last year?
- What other training have you received?
- How do you learn new things?
- Describe three key things that you learned last year.

Keep your eyes open

- Are the interviewers tired?
- How is their furniture? How does it compare to the company's executives' furniture?
- How much space / equipment / light do standard testers get, and how much do higher ranking staff get?
- Look for congruences and incongruences of claims regarding working conditions (e.g. 4-day work week)

Looking Good in an Interview

What makes you attractive to them?

- Skills, knowledge, aptitude, other (KSAO)
- Your independence and confidence
- Your reputation
- If you had to look for a job today, what would be your unique selling proposition? Are you happy with it? What kind of position will it gain for you?

What makes you look bad?

- Looking desperate
- Arrogance

What convinces them that you are serious about them?

- Background research
- Saying that you want the job
- Looking interested

Some characteristics of great testers

Alert	Attentive to detail	Analytical problem solver
Architect	Arrogance (usually, less is better)	Artistic (knowledgeably critique esthetic issues)
Assertive	Auditor	Author
Commitment (keep promises, stick around)	Commitment to a task (do what it takes)	Commitment to quality
Copes with difficult circumstances	Courageous	Creative
Credible	Curious (inquisitive)	Customer focused
Decision maker (good judgment)	Decisive	Not very defensive (able to take criticism)
Diplomatic	Editor (criticize / improve printed materials)	Effective with junior testers
Effective with senior testers	Effective with test managers	Effective with programmers

Some characteristics of great testers

Effective with non-testing managers	Empathetic	Empirical frame of reference
Empowering	Energizing	Fast abstraction skills
Financially aware and sophisticated	Finds bugs (intuitive tester)	Flexible
Goal setting	Glue (promotes group cohesiveness)	Humility
Integrity (honest; keeps commitments)	Interpersonally perceptive	Interviewer
Investigative reader	Leadership	Long term thinker
Meeting manager	Mentor	Multi-tasking
Organizer and planner	Persuasive	Politically perceptive
Policy and procedure developer	Pragmatic	Programmer

Some characteristics of great testers

Protective (stands behind his staff)	Punctual	Scholarly (collects information, can back up or evaluate arguments)
Sense of humor	Spoken communication	Strength of character
Subject matter expert	Substance abuser (not)	Team builder
Tolerant of ambiguity	Tolerant of different development approaches	UI design
Versatile (many abilities)	Warm (makes the human environment more pleasant)	Written communication
Zealot (Rarely desirable in large quantities.)	Catalyst	

Looking Good in an Interview

What marketing materials are you bringing?

- Resume, letters of reference, papers, printout of web pages, other stuff that shows your vision
- Work samples (beware of confidentiality)
- Comments on their product

Practice interviewing

- Interview lots of times
- Interview with companies that are non-critical
- Do mock interviews with friends

Send a follow-up letter

- Astonishingly few people send these.
- This is a marketing opportunity for you to spin the meeting's results.

Preparing to Negotiate

Fisher, R. & Ertel, D. (1995) *Getting Ready to Negotiate: The Getting to Yes Workbook*

The key things are

- Knowing what you want
- Knowing what they want
- Knowing what they think of themselves
- Knowing how they will present themselves as potential employers
- Knowing what your alternatives are (your best alternative to a negotiated agreement for this job)

PRACTICE NEGOTIATING

- *With friends*
- *With potential employers. Plan to blow several away.*
 - » *Learn your market value*
 - » *Learn what's out there*
 - » *Learn what seems to turn employers on and off.*

How Do You Negotiate?

You are negotiating a long term relationship that you have to live with

If you don't negotiate, you leave money on the table that cuts back on your lifetime earning expectations

If you don't negotiate, you leave your work open instead of picking your assignment

If you don't negotiate, you don't learn how the company will be when you do need to negotiate.

How Do You Negotiate?

Say what you want (non-monetary issues) or what excites you, early in the interview.

Refuse to provide previous salary info. Politely reject queries about your salary expectations until after the employer is excited about you.

Be enthusiastic but don't be over-eager.

Speak about their product in their vocabulary.

Find and point out ways in which you can help them. Make proposals, show examples of your thinking.

Let them know that you want the job.

Talk about your stretch opportunity. If you have to stretch for this job, let them see how they could make you happy with the job (how it is a fit for you) and how you could do it.

Keep your eye out for intimidating styles from the potential employer.

How Do You Negotiate?

Chapman, J. (1996, 3rd Ed.) *Negotiating Your Salary: How to Make \$1000 a Minute*

Fisher, R., Ury, W., & Patton, B. (1991), *Getting to Yes.*

Freund, J.C. (1992), *Smart Negotiating: How to Make Good Deals in the Real World*

O'Malley, M. (1998) *Are You Paid What You're Worth?*

Miller, L.J. (1998), *Get More Money on Your Next Job: 25 Proven Strategies for Getting More Money, Better Benefits, & Greater Job Security.*

Tarrant, J. (1997), *Perks & Parachutes: Negotiating Your Best Possible Employment Deal, from Salary and Bonus to Benefits and Protection.*

Dealing with Race, Gender, Age, etc.

H1 is creating a discriminatory environment.

A.D.A gives you right to notice of tests

I think I see a widening pay differential. Much of the program that I think is the problem is the negotiating style of the individual rather than a policy of the company. Some behaviors that turn out to have a severe differential impact are engaged in by people who would not call themselves (or normally be called) racist or sexist.

If you are a member of a group that is often treated as disadvantaged / easy target, then you should definitely:

- Read books on negotiation
- Take a negotiating class (seriously consider trying Karrass, not the nicey-nicey win/win stuff)
- Do practice interviews
- Join a group like Toastmasters
- Find ways to compare notes with white men in comparable positions. Knowledge is power.

How Do You Set Yourself Up for Success?

- Remember that if they don't treat you well in the interview, it won't get better later.
- Don't take a low rate to get in the door unless you are brand new and plan to leave once you get experience. They perceive you as more senior if they pay you more.
- If you have special needs, you must bargain for them *clearly and precisely* up front. The alternative—bring it up later—is often a loser.
- Get it in writing. Get any ambiguities cleared up in the writing. Trust me doesn't work well in many of these ingredients.
- Be specifically aware of the possibility of becoming the expendable 40+ manager who is out of work for a year. (If you're in this state, you have no fresh skills, no hot new experience, you look easily replaced, and therefore you find it intimidating to sell yourself.)

