

Looking for Your First Job in Software Testing

Cem Kaner, J.D., Ph.D., ASQ-CQE

Contact Information:

kaner@kaner.com

www.kaner.com (testing website)

www.badsoftware.com (legal website)

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Problems

- The boom is over
- Fewer companies are showing up at university career fairs
- More employers are doing defense-related work that requires (a) U.S. citizenship and (b) willingness to participate in military-related projects.
- Employers are less willing to work with students who need a work visa
- Employers advertise for experience that you don't have
- Job finding services on the Net seem to soak up resumes without providing benefit
- Resumes that you fill in at web sites seem to be ignored, not even acknowledged

Problems

- Fewer employers, especially in high-tech parts of the country, are willing to pay relocation costs or interview travel expenses for out-of-state job candidates (especially new graduates)
- Recruiters are less interested in fresh graduates
- Many of the advertised jobs are shams, people are posting an already-filled position to satisfy a corporate or government HR policy
- Pay scales vary wildly, it's hard to know "fair pay."

Perspective

- The super-boom in software hiring only lasted about three years.
- Yes, it is much harder to get a software job now than two years ago, but maybe not that much harder than ten years ago.
- You have to be more creative and much more persistent.

Basic Sales Training

1. Find a *prospect* (someone who *might* buy what you want to sell)
2. Get to the decision-maker
3. Create desire
4. Overcome objections
5. Ask for the sale (close the deal)
6. Protect your options
7. Sell a good product at a good price and provide good service. Build a reputation.

In a job search, you are selling yourself (your time, your skills, energy and creativity). Too many people, even good salespeople, forget to apply basic sales principles to this important sale.

Find A Prospect

- Search more creatively
 - The standard sources are swamped
- Contact the right people
- Learn about the company before you contact them
- Learn more about the company after they first contact you

Where to Find Jobs Search More Creatively

- Newspapers
- Magazines
- On-line services
- Internet search engines
- Recruiters
- Colleagues
- Spam (would you work for a company that spams you?)
- *REVIEW COMPANY WEBSITES AND TRY OUT THEIR PRODUCTS*
- *GO TO CONFERENCES*
- *JOIN E-MAIL LISTSERVS. Participate constructively.*

Contact the Right People: Get to the Decision Maker

- Recruiters rarely help students
- Job websites rarely help students
- Human Resources rarely helps students very much
- Find out who the hiring managers are and write to them directly

Recruiters Rarely Help Students (and sometimes they hurt)

- Recruiters want to place people in jobs and make their placement commissions
 - They're in a very competitive market
 - They're afraid of sending too many inappropriate people to an employer
 - afraid of alienating this employer by wasting her time
 - afraid of gaining a reputation for not understanding their clients needs
 - They can't afford to waste their own time
- They look for people with directly relevant experience, whose education, skills and other attributes are a reasonable approximation to the ones listed by the employer
- You lack the experience, maybe the proof of relevant education. You are an unknown. Or worse, you fit into one obvious pigeonhole and they fixate on it.

Recruiters

- If they present your resume, even badly, they are entitled to a fee if you get the job (or a closely related one at the company)
 - This gives them incentive to mass-mail your resume, even if it is widely ignored.
 - It presents your resume badly, but gives them a potential cut if you get work.
- **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
- **If you work with recruiters, contact them regularly**
 - Be consistent in the day / time that you contact them. Early morning is good
 - Remind them of you
 - Ask them of openings that have recently crossed their desk that you might be aware of.

Job Websites

- Essentially, these are semi-automated recruiters
- They don't know you and have no interest in you
- Zillions of people use them
- Employers post “openings” to them for many reasons. (The employer is usually anonymous, so suffers few/no consequences for the posting.)
- Employers' HR or clerks scan the resumes or the resumes are forwarded based on preplanned match criteria. Against experienced workers, you lose, even if you're better.

Human Resources

- Don't really understand technical jobs
- Don't really understand technical qualifications
- Try to match people with stated requirements, often simplistically
- They'll screen you out because you don't match stated requirements (or the right subset of them)

Find the Hiring Manager and Impress Her

- The person who knows whether you can meet the job's needs is the person who will supervise (and be accountable for) your work
- Search the web
 - Companies
 - Products
 - Resumes of people
 - Authors
 - Problems companies have had, that you can help them with
- Letters to “test manager”
- Ask for informational interviews
- Mailing lists
- Conferences and attendee lists
- Professional society meetings

Email Query Letters: Do it well or don't do it

- Essential to personalize the letter
 - Know something about the person
 - Know something about the company
 - Say what you know
 - Say why they are particularly important to you
 - Make it obvious (from the content of the letter) that this is not a form letter (even though 80% of it might be)
 - Otherwise, you'll be seen as a &*^%\$&*% spammer.
- Grammar and spelling **MUST** be perfect for a testing query

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)

*Create Desire:
Know what they (should) want*

- Identify the knowledge, skills and attributes that you have that will make you more attractive to employers
- Develop more of the knowledge, skills and attributes that will make you attractive to employers

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	

Create Desire: The Resume

- 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.
- Spelling / grammar errors and bad formatting can disqualify you quickly
- 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.

Cover Letter

- 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.
- Personalize the cover letter
 - What you know about the company that makes it attractive
 - What you know about the hiring manager (if you’re sure he’s still there) that makes the job attractive
 - What you know about the products, opportunities, segment, etc., that particularly qualifies or interests you

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.
- Lies on resumes surface at the least convenient times. It's easy to get you fired if a false statement is discovered in the resume, years after you were hired.

The Resume Packet

- Letters of reference
- Samples of work
- Summary of courses taken
- Samples of projects
- Samples of publications or other writing samples

- **SOMETIMES**, send these with the application (or send a subset of them)
- **BRING THEM TO THE INTERVIEW.** Bring several copies.

How Do You Build a Reputation?

- Talks at local meetings (get practice at Toastmasters)
- Teach classes at local universities / colleges
- Go to conferences
- Publish
- Create a web site
- Get letters of reference
 - From professors
 - From people who you did volunteer work for
 - From employers
- Letters of reference are more effective if they have demonstrative detail
- Offer to first-draft the letter
 - Don't be overly flowery, don't push the superlatives.

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

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.

Overcome Objections

- Not experienced enough? *Maybe you are.* Explain your experience.
- Not experienced enough? *Maybe you are.* Document what you have.
- Not experienced enough? Get more experience.
- Don't know a specific tool? *Maybe this is not a big deal for you.* How quickly could you learn it?

Ask for the Sale

- Thank you letter immediately after the interview
 - To the hiring manager
 - Maybe to all face to face interviewers
- Follow up to make sure people know you're still there
- Find a way to set a time limit, create some urgency for a decision

Protect Your Options

- Don't count on a job that's not yet offered
- Limit the range of jobs a recruiter can handle for you (none that you don't know about)
- Don't promise to keep yourself off the market until a decision is made
- Keep looking until you have the job in hand
- Some people keep looking until 2 weeks into the job
 - Beware of how you present this

Get What You Want / Need

- You have to be aware of your own wants, needs, and advocate for them. No one will do this for you, for your entire career.

What Will Make You Happy?

- Money, stock, benefits, money, job security (hah!), 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

- **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?

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*.

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.)

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.