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IMAGE\_CAMPBELL LAIRD

How are you faring compared to other engineers? Where are the openings and big bucks? What is your job outlook? Our exclusive annual salary survey tells all.

# ROLLING RAINING —AT LEAST FOR MOST

COVER STORY

**RECOVERY SIGNS ARE** what we've found in our 2004 *Design News* annual salary survey. Most of you (81.3 percent) got a raise, our poll shows, with quite a few (26.6 percent) receiving an increase of 4 percent or more. Those earning at least \$70,000 a year made up 51.2 percent of our respondents, compared to 41.1 percent a year ago. Though encouraging, these numbers are far from indicating a full upswing on the job front. For the third year, half of you told us that your companies had let go engineers. Uncertainty over issues such as outsourcing continues to worry engineers, although only 10.5 percent of you fret about your career. >>

# Longevity Pays

For those of you who've had 10 years of experience or more, the job outlook is improving significantly. According to Ben Liebstein, managing director of Bennett Allen & Associates, which specializes in recruiting mechanical and electrical engineers, companies that have previously reduced their workforce and lost their most knowledgeable staff members are now actively seeking senior-level engineers (see "More Experience, Better Pay" chart).

Longevity at a company is also more valued, Liebstein adds, although companies may only be compensating those remaining better than in the years past when reductions must be made (see "How Long Have You Worked For Your Present Employer?" chart).

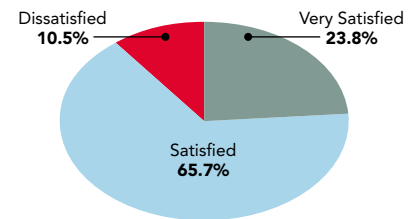
There's also good news for those with the hot skills. Though hit hard in previous downturns, MEs and EEs—especially those who specialize in product development—are finally seeing a placement rebound. Liebstein's firm alone has seen a 40-percent surge in the recruitment for MEs and EEs so far in 2004, compared with the same period last year. "The jobs are really all over," Liebstein says, asserting that the demand for product design engineers is much greater than the supply.

## Fly High with the Aerospace Industry

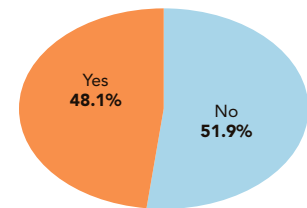
Aerospace is another discipline that has a skyrocketing demand for new hires, thanks to the growing number of government contracts being rewarded to the industry's heavyweights such as Lockheed Martin Corp. and Boeing.

For 2004 alone, Lockheed plans to hire 14,000 recent college graduates, while Boeing is offering annual salaries of \$55,000 to \$60,000 to entry-level engineers with a Bachelor's of Science degree—significantly higher than the \$47,300 shown in our survey (see "More Experience, Higher Pay" chart on page 76). On average, aerospace companies also pay engineers more—\$80,200 per year—compared to \$75,999 or less made annually by 56 percent of our survey respondents.

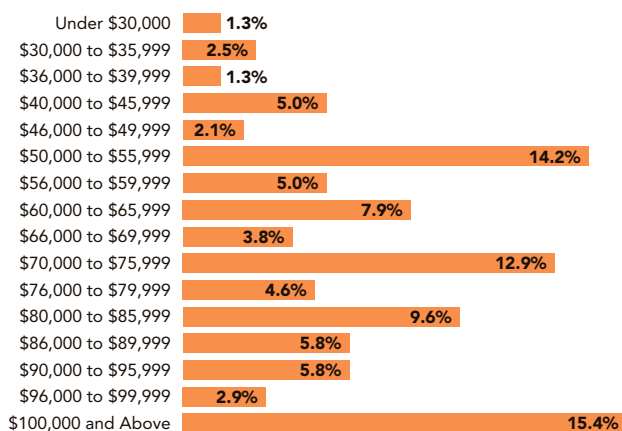
## How Satisfied Are You with Your Engineering Career?



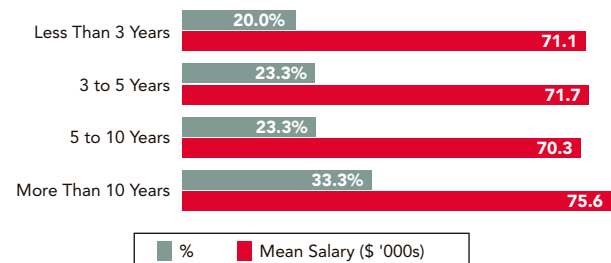
## Has Your Company Laid Off Engineers in the Past 12 Months?



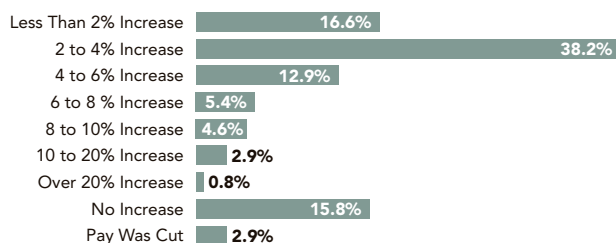
## Annual Base Salary



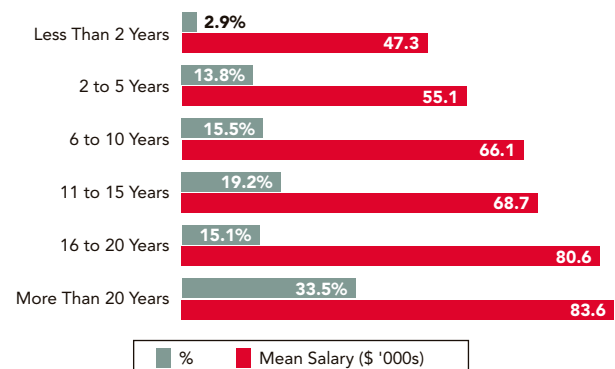
## How Long Have You Worked For Your Present Employer?



## Salary Level Changes in the Past Year



## More Experience, Better Pay



**THOUGH HIT HARD IN PREVIOUS DOWNTURNS, MEs AND EEs—ESPECIALLY THOSE WHO SPECIALIZE IN PRODUCT DEVELOPMENT—ARE FINALLY SEEING A PLACEMENT REBOUND.**

Barbara Murphy of Boeing's communications and public relations office says her company is seeking engineers to work in the following disciplines: embedded software, laser and electro, optical, imaging, stress structural, thermal design, control system, avionic system, radar system, payload system, and electronic warfare. A complete list of openings is available on Boeing's website (<http://rbi.ims.ca/3852-545>). Murphy urges those who are interested in the positions to contact the hiring managers as soon as possible.

**Outsourcing Clouds Manufacturing**

While job outlook is brightening up for some of you, manufacturing continues to mean uncertain future to those who are facing the possibility of losing their jobs to offshore counterparts, Liebshtein comments.

In June the Bureau of Labor Statistics released its very first outsourcing study, which says offshore and domestic outsourcing respectively accounted for 1.9 percent and 4.2 percent of the 239,000 layoffs from January to March 2004. Although the report pinpoints neither manufacturing nor engineering jobs, many of you have told us that you are concerned about the outsourcing impact on your profession.

"Not losing the job to India," one of you told us when we asked about the most difficult challenge you face at your current job. "Outsourcing to low-cost countries," another one of you replied.

After all, some of your worries are well founded. More of you are seeing nearly half of your company's test work being outsourced (see "How Much of Your Company's Test Work is Outsourced?" chart). And among the design work being relocated, mechanical design (45.3 percent) tops all, followed by CAD (26.3 percent), test and measurement (26.3 percent), circuit design (22.3 percent), board-level design (21.8 percent), and systems design (19.6 percent).

We could not decide how many of you are affected by the out-

**Openings Unfilled Despite a Need to Hire**

*Tightened and delayed security clearance procedures stagnates Boeing's recruitment*

Like many aerospace companies who are being rewarded more and more government contracts, Boeing is actively seeking new hires in various disciplines. Despite its desire to recruit in this so-called jobless recovery where previous layoffs are still a many, and the lurid salary offer is at least \$55,000 even to entry-level engineers, the company is not filling the openings as quickly as it would like to. That's because too many of these positions require security clearance from the Department of Defense.

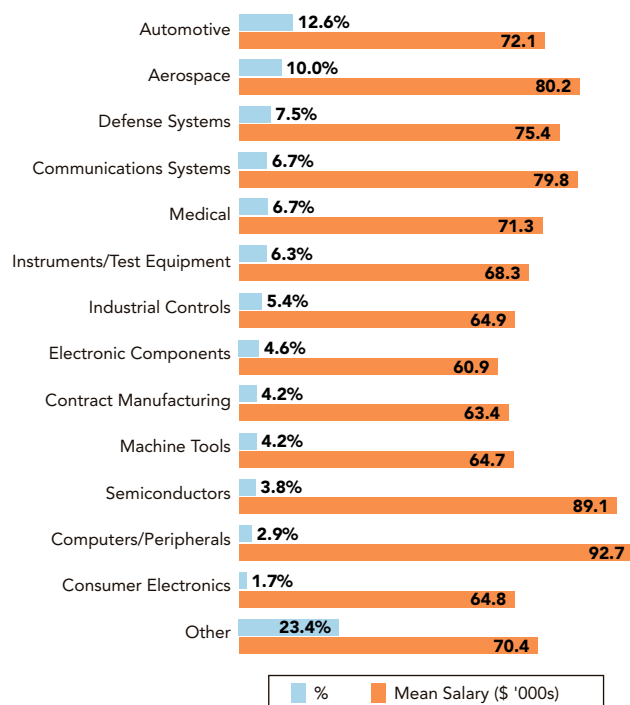
"I think it's not only for Boeing but also for other aerospace companies too that the challenge is to increase the size of the pool," says Barbara Murphy of Boeing's communications and public relations office, pointing to the non-growing number of engineers who have been granted government clearance to work in secured projects. Boeing currently has 6,000 technical openings unfilled because they all require security clearance.

Though all new hires are qualified to apply, clearance processing takes up to 18 months to complete—three times as long as it used to take—and Boeing is resorting to candidates who have already obtained clearance from previous work, Murphy says.

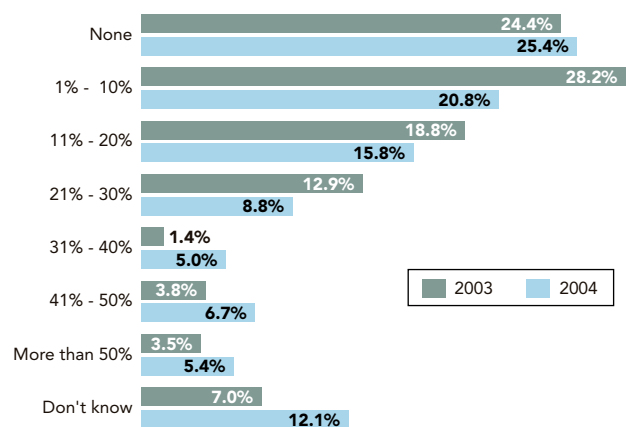
The company is encouraging internal candidates to check with the hiring manager for interim clearance details. But for external applicants, they may only be considered for non-secured positions, Murphy contends.

—WL

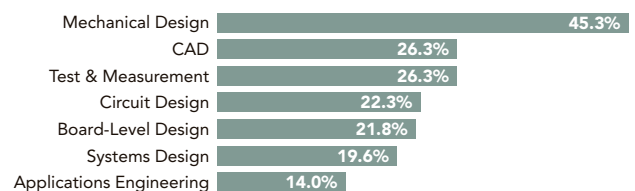
**What is Your Company's Major Product Line?**



**How Much of Your Company's Test Work is Outsourced?**



**What Specific Design Work is Your Company Outsourcing?**



## In June the Bureau of Labor Statistics released its very first outsourcing study, which says offshore and domestic outsourcing respectively accounted for 1.9 percent and 4.2 percent of the 239,000 layoffs from January to March 2004.

We could not decide how many of you are affected by the outsourcing pinch. But we've located engineers like Aaron Grenlund and Don Barr to tell you how they're coping with the uncertainty still faced by many of you on the job front—whether it's because of outsourcing or other factors.

### I Will Survive

A fourth-year systems engineer at AT&T Wireless Services who specializes in international data center upgrade integration, Grenlund has managed to keep his job from being relocated. But his workload has increased "significantly," he says, because the offshore staff mem-

bers he works with often lack the updated training and technical experience needed to finish their jobs.

Raises, traveling allowance, and training budgets have also been cut back, Grenlund adds, and he's disappointed to see promotions practically being eliminated, echoing the griping we've heard from 42.3 percent of you who cited the lack of advancement as what you like least about your jobs.

Complicated by the fact that AT&T Wireless Services are under review for an acquisition, Grenlund is pursuing a part-time EET and MBA in light of future uncertainty. After all, our survey shows a close correlation between education and pay levels (see "Education and Rewards" on page 76). From 2003 to 2004, engineers with a Ph.D. and MBA received the highest jump in salaries—an 18.5-percent and a 16.2-percent spike respectively.

Depending on your preference, "committing to the company where you already have an advantage" may not be a bad idea either, comments Don Barr, development engineer with Applied MEMS Inc. After a short leave for NASA in 1998, Barr returned to Applied MEMS, where no layoff has been seen, as the MEMS industry has yet not fledged its wings and is shielded from outsourcing issues.

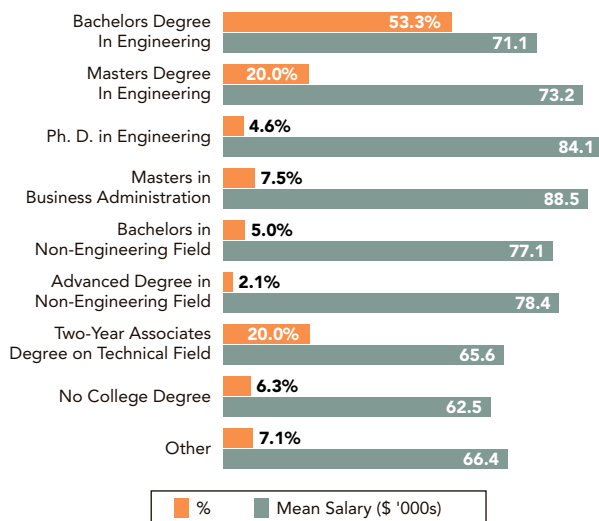
But he still keeps a good variety of contacts on his Rolodex, Barr says, and has purchased a \$1,500 Alibre CAD software package—which was not reimbursed by his company—to broaden and diversify his skills.

"Any additional skills would be beneficial," echoes Ben Liebstein of Bennett Allen & Associates, adding that job seekers should "keep their eyes and ears open."

And for those who are really nervous about job uncertainty, Grenlund recommends, "Don't run out to make any big purchases."

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### Education Reaps Rewards



### WEB RESOURCES

//Go to the following websites for more info//

2003 *Design News* annual salary survey results:

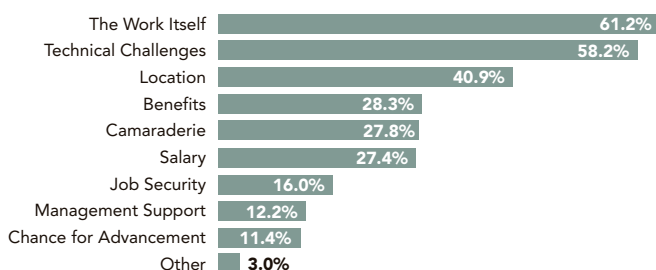
<http://rbi.ims.ca/3852-544>

Current openings at Boeing: <http://rbi.ims.ca/3852-545>

"Extended Mass Layoffs Associated with Domestic and Overseas Relocations, First Quarter 2004" report by the Bureau of Labor Statistics: <http://rbi.ims.ca/3852-546>

Recruitment services and job search tips by Bennett Allen & Associates: <http://rbi.ims.ca/3852-547>

### What Do You Like Most About Your Job?



### What Do You Like Least About Your Job?

