



Professional Guideline Series:

Guidelines for Professional Employment

A Framework For Communication



Prepared by IEEE-USA's Career and Employment Services Committee

TABLE OF CONTENTS

INTRODUCTION		3
I. CAREER OUTLOOK		4
II. RECRUITMENT		6
III. PROFESSIONAL EMPLOYMENT		8
Ethical Issues		8
Productive Practices		9
Compensation Practices		10
Intellectual Property		11
IV. PROFESSIONAL DEVELOPMENT		12
V. PERFORMANCE APPRAISALS		14
VI. CAREER CHOICES		15
VII. EMPLOYMENT SEPARATION		16

These Guidelines contain both an employer and an engineer segment under each of the topics listed below. While *employer* refers to that aggregate of personnel who originate and carry out the organization's policies, many professional employees participate in the employer role. The term *engineers* in these guidelines includes all engineering classification levels, covering engineers who are functioning as managers, as well as subordinates of those engineering managers. The specific role of the engineer will determine whether the employer or engineer guidelines apply. We believe these guidelines are also appropriate for many scientists.

All rights reserved. Copyright © 2003 by the Institute of Electrical and Electronics Engineers, Inc. For copying, reprint or republication permission, write to the Manager of Copyrights and Trademarks, IEEE Operations Center, 445 Hoes Lane, P.O. Box 1331, Piscataway, NJ 08855-1331.

INTRODUCTION

Our nation's economy is presenting new challenges to both employers and the technical work force. Global competition, deregulation and the increased influence of financial leaders and investors have led many organizations to change their employment practices drastically. As a result, downsizing, restructuring, shifting organizations and jobs overseas have been commonplace within organizations. Engineers should expect that organizations will act primarily in what they perceive to be their enlightened self-interest.

The strength of our nation will always be dependent on having highly competent and dedicated engineering and science professionals. We can enhance future economic strength by nurturing employer-employee relationships that will help retain and motivate experienced engineers, and will also continue to attract new talent.

These Guidelines can help employers and employees to understand clearly and fully the conditions in the workplace of the current and coming years, and they can provide guidance toward behavior that will be beneficial to the country and the engineering profession.

Regular discussion of these Guidelines among employers, managers, human resources personnel and engineers will provide a basis for enhancing their working relationships and will lead to good communication and cooperation in the workplace.

CAREER OUTLOOK

Engineering continues to be an attractive and rewarding profession for both incumbent and future engineers. But engineers must adapt to the existing competitive conditions. To have the best chance for a successful career, engineers must commit their full energies to their present job and give provisional trust to their employers, yet be aware that the employers may have to make decisions that adversely affect their career.

Accumulated evidence suggests that the interests of our nation, employers and engineers will be best served if employment conditions include:

- An environment that provides high morale based on belief in the employer's product and in the importance of the employee's role in the organization's success
- A certain degree of employment stability
- A reward system that gives fair credit and an equitable monetary share to all owners, managers and employees who play a part in the organization's success in the marketplace
- A work climate that demonstrates to good students that engineering offers a premier career opportunity

Employers

Employers' interests are expected to include achieving a highly productive work force that meets the organization's needs effectively at the lowest reasonable cost, and providing an environment that helps the organization retain the best, brightest and most creative professionals. Employers should:

- Try to avoid permitting short-term corporate priorities to overshadow the long-term health of the company, including their work force. Avoid policies and practices that eat away at the competency of their corps of engineers.
- Strive for stable employment, is a policy that enhances employee loyalty and good morale, as well as the quality and quantity of work output.
- Practice such good-faith measures as staffing conservatively to avoid short-term cycles of hiring and layoff; subcontracting work in periods of high demand; and using temporary measures, such as four-day work weeks or temporary across-the-board pay cuts to avoid cyclical layoffs.

Engineers

Engineers' interests include stable, predictable and enjoyable employment; pay and recognition proportional to the value of their contribution; and opportunities for personal and professional growth that lead to a satisfying career:

- Engineers' careers should be regarded as a "business" that requires goal-setting, planning, marketing and investment in personal growth. And because engineers may be called upon at short notice to find another job, they must continuously improve their skills and employability to maintain their own viability as a business.
- Engineers must take responsibility for developing their own careers and professional growth. Employers may find it to their benefit to provide substantial help. Engineers should seek challenging assignments and should be prepared to respond to employers' changing business and technical needs by staying current, competent, flexible and adaptive.
- Professionals must become mature realists. They must not assume that their employer will take care of them, or that their job has tenure. At best, they should expect their employer to recognize their economic value to the organization and the value of the morale achieved by fair treatment and genuine caring for employees.

RECRUITMENT

Recruitment by employers and job searching by professionals calls for ethical and honest communication. Hiring should be based on a professional's competence and ability to meet job requirements. Both parties will benefit by portraying their circumstances with full integrity and good faith to maximize the chances for developing a long-term relationship.

Employers

Employers' interests include: obtaining adequate staff for the immediate assignment at the lowest recruitment cost, including orientation and training, and obtaining people with the potential to progressively grow into more responsible assignments:

- Line managers should be included on college recruitment teams. They can best describe the available assignments, offer first-hand experience, and respond to questions with integrity and good faith.
- Recruiting professionals involves advertising, screening many resumes, interviewing, and selecting the best candidates. Screening criteria should be established between line management and recruiters. Care should be taken to ensure compliance with applicable employment laws.
- Employment and temporary agencies can help companies recruit contract employees and temporary professionals effectively. In some cases, however, companies may want to use the traditional recruiting process, being open and straightforward about a job that is temporary or probationary and about the chances for permanence.
- Employment applications should be kept confidential. Employers should obtain permission from applicants before contacting current employers.
- An employer's written offer should state all relevant terms, including salary, relocation assistance, expected type and duration of employment, and intellectual property obligations. Employers should provide prospective employees copies of any documents requiring a signature, before they accept a job offer.
- Employers should minimize hiring during periods of major personnel reductions, except to correct severe skills mix problems.
- Employers should strive for equal opportunity for all in their recruiting and operating policies.
- Non-compete clauses that limit the opportunity for professional employees to seek other employment or, subsequent to separation, to establish independent enterprises, should be introduced only with the minimum requirements for the relevant employee.

Engineers

- Most engineers' interests include obtaining a job quickly; obtaining a job with a company which they perceive cares for its employees; and making a satisfactory advancement toward a career goal.
- Career-oriented professionals can reasonably expect to change employment several times during the course of their careers. By building a network of colleagues and acquaintances in many companies, including their own, they will increase their ability to make appropriate career moves.
- Engineers should use their network of colleagues and personal research about company employment practices to develop a prioritized list of target opportunities. They should also help their colleagues as a way to develop themselves as professionals.
- Engineers should consider contract and temporary opportunities as possible avenues to secure permanent status with a company.
- A large percentage of new jobs available to professionals comes from small companies, either in the start-up or early development phase. When considering these higher-risk opportunities, engineers should assess both the contribution they can make to the company's success, and the risk of possible failure.
- Professionals must be honest and open in all dealings with potential employers. Prospective employees should attend interviews and accept reimbursement only for those job opportunities in which they have a sincere interest.
- Engineers should evaluate past, present and future confidentiality obligations regarding trade secrets and proprietary information connected with potential employment. They should not expect to use or divulge any trade secrets or proprietary information in seeking or accepting employment. They should be aware of their legal rights and obligations in this regard.
- Engineers' signed applications for employment will usually serve as the basis of their employment agreement. As such, they should understand and accept all terms before signing any document.
- Applicants are ethically obligated to honor an accepted employment offer, unless they are formally released from the commitment.

PROFESSIONAL EMPLOYMENT

Ethical Issues:

Society relies on technology being utilized ethically by organizations and by technical professionals. Unethical behavior reflects on engineering and scientific professionals, and can damage the success of employers, the political strength of the nation, and the overall well-being of society. It behooves employers and employees to establish and adhere to ethical behavior for their own benefit, and as a primary responsibility to society, in general.

Because ethical issues are often not clear-cut, “right-or-wrong” issues, but rather are “gray areas” subject to individual interpretation, ongoing communication between employers and engineers is essential. Peer review is highly recommended to obtain the views and feedback of other experts. Ethical conflict situations should be resolved, if at all possible, within the organization. Fulfilling one’s ethical obligation to protect the public may require going outside, but that is the least desired course of action.

Employers

The employer’s interest is to have a strong competitive organization that lives within the legal rules of the nations in which it operates. Most employers have found it in their self-interest to require all managers and employees to conform rigorously to high ethical standards:

- Employers should create and publicize their ethical conduct policy to all employees. Formal procedures should exist within the organization for resolving ethical conflicts in a fair manner.
- Organizational policy must conform to applicable laws and regulations. In addition, policies regarding professional conduct should not conflict with the Code of Ethics of their employees’ professional societies.

Engineers

Engineers want to be able to express their views and to be heard. When they speak out about an ethically questionable instruction, they expect to be convinced by rational explanations. If they still disagree, they should expect a fair process for resolving the dispute without suffering punishment:

- Professionals are expected to speak out on difficult issues in a constructive way.
- Employees should bring unresolvable ethical conflicts (of interpretation) to their employer’s established review process. They must cooperate fully to achieve resolution through negotiation, while upholding their professional responsibilities.
- Engineers should be prepared to separate from employers whose ethical behavior is unacceptable.

Productive Practices:

Current economic conditions require that employers and employees follow proven productive practices to achieve a competitive edge.

Employers

Employers' self-interests are to adopt those practices that produce highly effective outputs at reasonable cost. Employers understand that the quality and morale of their professionals are important to their success:

- In most technical organizations, there should be continuous investment in research and development to ensure the most secure future for the organization and for its employees.
- Employers who show concern for the well-being of their employees will improve productivity. They should offer flexible working periods, suitable working conditions, stable employment, early pension vesting, and reward unique creativity and productivity.
- Employers should balance the attention and reward paid to each of the primary stakeholders in the organization – owners, investors, managers and other employees.
- Employers should recognize the principal authors of each report, memorandum or paper; clearly assign credit for the document; and help the reader to judge its content.

Engineers

The self-interest of engineers is to continually seek increased understanding of their employer's business, including the needs of the customers and the market in general; to be better able to work toward their employer's goals; and to understand the constraints and trade-offs associated with their projects:

- Engineers will improve their employability by applying their knowledge and skills on multiple projects, and by taking the initiative to help others, while still accomplishing their assigned duties.
- Engineers should document ideas, accomplishments and comments related to their work efforts with short memos or notes. Such documentation may provide ideas for article publication, recommendation to the employer, or material helpful for performance appraisals. For example, a properly executed logbook is necessary for patent applications.

Compensation Practices:

Compensation practices are a direct expression of how the professional employee is valued, and strongly influence both individual and group morale, the ensuing productivity, and the organization's recruiting and retention success.

Employers

It is in the interest of the employer to pay enough to attract the quality of the work force needed, and to be competitive for top talent:

- Employers should not use unpaid overtime to make up for lack of sufficient assigned personnel or inadequate planning. While professional employees are exempt from federal wage and hour laws, they often voluntarily work overtime, especially near deadlines. Any significant overtime for extended periods required by the employer should be paid either monetarily, or by compensatory time off.
- Most large organizations trade detailed salary data with comparable organizations in similar businesses. Providing employees with comparative salary data is a constructive step in communicating a baseline for salary practices.
- Organizations should establish a defined interval for delivering merit increases. In this way employees receive real feedback on their standing in the organization without indefinite delay.
- Employers should avoid basing any competitive bidding advantage on the practice of "wage-busting," as defined in the *Service Contract Act*.

Engineers

The self-interest of professional employees is to receive commensurate recognition and monetary return for their expertise:

- When evaluating a compensation action, engineers should consider the overall environment for professional achievement and enrichment, specific individual components of fringe benefit and pension packages, employment stability, and potential opportunities to participate in the organization's financial offerings and opportunities.
- Starting compensation packages are subject to negotiation, and prospective employees should become informed on what to expect as a baseline. On the other hand, merit increases are usually not negotiable; so professionals should be sure they convey their input and expectations to their supervisors at the right time.

Intellectual Property:

One of the most important assets of an organization is intellectual property, which includes patents, trade secrets and copyrights. Some of these assets reside in the know-how of the professional, yet belong to the organization. Protecting this property is critical to the well-being of the organization.

Employers

- Employers should outline employees' obligations in writing, while protecting employed inventors' rights to inventions that are not related to the scope of employment.
- Employers should compensate professionals appropriately for significant contributions to the intellectual wealth of the organization.

Engineers

- Engineers should become informed about their organization's protection of intellectual property.
- While leaving an organization, engineers should understand that some of the knowledge they will take with them belongs to the organization they are leaving. They should be prepared to transfer their information to other employees before they depart.

PROFESSIONAL DEVELOPMENT

While a core purpose of any organization is to develop and continually improve the products or services it offers to customers, developing engineers' skills and capabilities is necessary for sustaining this accomplishment. The rapidly changing technical environment, and the advent of new technologies require engineers' technical and leadership skills to be improved continuously. Developing engineers' competencies result in better skilled, more productive and innovative professionals, which helps the organization, and increases our nation's pool of competent engineers.

Employers

Employers' interests include the supervisors' desires to keep well-qualified engineers on the same or similar projects to minimize risks, and higher managements' desires to improve organization capability by developing their engineers' capabilities. It is in the best interest of the employer to provide the majority of that development:

- Employers should work in partnership with engineers by encouraging and supporting professional and personal development.
- Employers should strongly encourage mentoring, informal or organized, and encourage professionals to establish productive relationships with more experienced professionals to learn how work gets done; to gain or improve technical and operating skills; and to learn an organization's history.
- In-house training programs that keep engineers current can be focused on organization's needs. Such training should be provided at the employer's expense.
- Employers who want to nurture engineering leaders should support engineers' continued training and education. They should encourage engineers to take appropriate continuing education courses by offering tuition refunds.
- Employers should provide opportunities for non-managers to broaden their focus; to make presentations to customer and upper-level managers; and to guide and develop others.
- Employers should encourage engineers to participate in job-related professional and technical societies, and attend worthwhile professional conferences. Employer support of these activities should be based on the judged value to the organization.

Engineers

The engineer's interest is to grow and develop as rapidly as possible to maximize employability and chances for a satisfactory career:

- Engineers should constantly seek challenging and varied assignments and opportunities for training. They should periodically evaluate their assignments to be sure there is sufficient challenge for adequate growth. When challenges no

longer exist, engineers should seek new assignments, a new supervisor or a new job – whatever it takes to maintain their employability.

- Engineers must adopt a continuous learning attitude. Learning occurs best on challenging job assignments, but it also helps to engage in specific learning projects.
- Engineers should improve their non-technical skills to improve their performance and their overall career development. Non-technical skills vital to engineers' professional well-being include judgment and decision-making, administrative, interpersonal, written and verbal communication, leadership, and work motivation skills.
- Professionals often find that a mentor can help them improve their effectiveness. Most professionals should develop a variety of mentor relationships as they progress or change assignments.
- Professionals can increase their value to an organization by guiding, enhancing and developing fellow employees.
- Engineers who join and actively participate in professional and technical societies will be able to network with other professionals who can provide them with knowledge and support.
- Engineers should consider preparing technical and professional papers for publication and presentation. This effort will increase their knowledge, reflect favorably on the organization, and broaden their professional network.
- Professional licensure is an important avenue of development for engineers. While professional engineers and scientists who are employed by organizations offering products and general services are usually covered by an industrial exemption, engineers who are self-employed or who intend to do consulting engineering work may be required by law to obtain professional licensure in the states or territories where they practice.

PERFORMANCE APPRAISALS

To be effective, feedback on performance needs to be given when the opportunity for praise or the need for improvement arises – not just at established review periods.

By their nature, performance appraisals of professionals are judgmental. Yet, with or without a formal process, judgments are made to determine pay, raises, promotions, and separation. Without these appraisal processes, these judgments are covert and may surprise or even shock the employee.

Employers

By using performance appraisals, employers can ensure that employees receive proper counseling and coaching from supervisors. Performance appraisals build employee histories that can help justify such actions as raises, bonuses, changes in assignment and separation:

- Employers should offer a formal, written performance appraisal process. Appraisals should be based on previously agreed-upon goals and objectives, both for progress on the job and for personal growth. Peer input should be solicited. Both parties should sign the written appraisal when completed, indicating concurrence or pointing out items of non-concurrence.
- Appraisers should strive to be open and honest and should appraise professionals as objectively as possible.

Engineers

The engineer's interest is to learn what the supervisor's expectations were and are, and how well those expectations are being met. Another stake is to establish collaboration with the employer on growth goals and career objectives:

- Engineers should become informed of their employer's expectations by communicating often with supervisors, managers and mentors.
- Engineers should understand their organization's performance appraisal process. The appraisal should be regarded as an opportunity to give inputs to the supervisor, and to bring the engineer's views into congruence with the supervisor's view by providing factual information and perspective that the supervisor may not have had.
- Engineers should understand how their performance affects the relationship between improving product and service quality for customers, while emphasizing productivity and profitability.
- During performance appraisals, engineers should be honest, and strive for personal objectivity.
- Engineers should let negative feedback "settle out," then reflect on it in the best light possible. Such feedback can provide an opportunity to learn, and engineers can use it to re-evaluate their thinking, and take corrective action, when necessary.

CAREER CHOICES

During the course of their careers, engineers will face choices, such as moving from a technical to a managerial position. Although some organizations allow switching back and forth on the “dual ladder,” managerial assignments seldom allow time to do enough technical work to remain employable as a technical contributor.

In the past, many engineers and scientists perceived that the most successful careers required moving into management. With the current decrease in layers of management, there is less opportunity to “move up the ladder” in many organizations.

Employers

Employers’ interest in career choices is in appropriately filling managerial positions with candidates having the highest potential for success, and in correcting mistaken choices with minimum embarrassment:

- Employers should be open, and communicate the process they use to select professionals for management positions.
- Employers should strive to empower teams of employees to make decisions at the lowest appropriate levels.
- Employers should promote from within whenever possible, to nurture and provide opportunities for current employees.
- Employers should encourage employees’ mobility within the organization for purposes of either advancement, or to broaden job skills. Managers should use mobility tools such as job posting, skills inventories, internal recruiting, counseling, internships and rotational assignments. In turn, supervisors should not block, but rather assist in, formulating transfer plans for their engineers.

Engineers

Engineers’ interests are in making the best career choices for advancement to a level that is satisfying, enjoyable, financially rewarding, and provides reasonable job security:

- Professionals should seek opportunities for taking responsibility, either in management or technical positions. They should learn to promote their skills and experience, and seek supervisory positions only after acquiring a solid technical base, to ensure continued employability.
- Professionals should realize that taking management responsibility or offering leadership from any technical position comes with demonstrating performance and risk taking.
- Professionals should always be aware of future events, such as the end of the current project or product line, and should develop alternative plans for responding.

EMPLOYMENT SEPARATION

When an engineer and employer separate, there are serious consequences for both parties, regardless of which party initiated the separation. The employer must cope with the loss of the engineer's accumulated knowledge and experience, while the engineer usually must go through the job search process and perhaps have to uproot and relocate. When separation becomes a reality, it's important that the impact to both the engineer and employer be minimized.

Employers

Employers' enlightened interests in separation are to lose only their least productive people, keeping those whose loss will be damaging; and to minimize legal risks, negative feelings of those separated, and morale loss of those remaining. Sometimes, engineers' salaries outpace the value of current skills or business needs. In those instances, renegotiation of pay level may be preferable to separation:

- Employers should communicate their strategies, objectives and organization results to engineers on an ongoing basis. If layoffs occur, this information helps explain the reasons.
- Employers should consider re-training or offering lateral transfers before letting engineers go. If layoffs are necessary, employers should inform engineers in a personal, face-to-face session.
- Employers should resolve personnel problems as they occur, and avoid using layoffs to correct management mistakes.
- Employers should offer a competitive severance package to laid-off engineers. They should also offer outplacement and counseling services to all laid-off employees.

Employees

The engineers' interest is to avoid separation unless it is voluntary, and to maximize financial benefits of separation to help bridge to the next job:

- Engineers who consider resigning should first consider whether a transfer would be a better alternative. They should take into account the benefits and opportunities they would forfeit, including pension vesting, vacation accrual and company stock investment options.
- Engineers can increase their negotiating position by building a financial reserve that will cover between-job periods.
- Engineers should provide adequate advance notice, usually a month, to their employer when they initiate separation.