Letter of Comment No: 3080 File Reference: 1102-100

# QUALCOMM Incorporated Comment Letter

# FASB Exposure Draft on Share-Based Payment Public Roundtable in Palo Alto, CA on June 24, 2004

Please accept this comment letter in connection with QUALCOMM's request to be invited to participate in the June 24, 2004 Public Roundtable in Palo Alto, CA to discuss the FASB Exposure Draft on Share-Based Payment.

#### Introduction

QUALCOMM Incorporated has broad, equity-based incentive programs that have been the cornerstone of our success in recruiting and retaining a highly skilled workforce, allowing QUALCOMM to become the market leader in wireless telecommunications products and services.

We were one of only 16 companies to participate in FASB's 2003 Field Visit Program. Since that time, we have studied the suitability of binomial models for employee stock options expensing. We believe our knowledge and experience in this regard would be an important contribution to the public roundtable discussion.

#### The Value of Accounting Principles

We believe the Board's exposure draft fails to adhere to the fundamental principles that accounting standards should be accurate, measurable, practical, comparable, consistent, auditable and generally accepted. Investors need and want clear and accurate information. Accounting standards are becoming more complex and esoteric, and it is becoming more difficult and expensive to produce, audit and certify compliant financial statements.

The rapid movement towards fair value accounting of non-cash items is creating a growing discrepancy between GAAP income and actual cash flow. We believe the Board's exposure draft will have the undesired effect of further reducing the usefulness of GAAP financial statements in measuring a company's current net worth and earnings potential.

We urge the Board to take more time to more carefully and openly consider the accounting and valuation questions that have been raised in connection with equity-based compensation. Expensing would concentrate stock options among top executives and dampen the opportunities for rank-and-file equity participation. It would allow foreign companies with non-GAAP accounting methods to lure key employees away from the U.S. It is critical to consider the socio-economic and competitive impacts of expensing on U.S. companies and workplace innovation prior to the adoption of a sweeping change in the accounting for equity-based incentive programs.

# The Cost of Employee Stock Options

We strongly disagree with the Board's conclusion that employee services received in exchange for equity instruments give rise to a recognizable compensation expense.

We believe the fair value of employee stock options cannot be measured with sufficient reliability and accuracy to warrant an expense. Mandatory recognition of an expense that cannot be reliably measured is against fundamental accounting principles. Further, the costs of administering the exposure draft outweigh the benefits.

Stock options have value on the grant date; however, they can't be accurately valued because they represent contingent equity participation. The primary objectives of employee stock options are to motivate and retain employees, to align their interests with stockholders, and to increase the value of the company's stock. Employee compensation is a rewarding by-product that is conditioned upon the company having successful long-term performance and stock price growth.

The net cost of stock options, if any, is borne by stockholders in the form of ownership dilution. This cost is reported in diluted EPS using the treasury stock method. It computes EPS by using in-the-money stock options *even if* they are not vested. This conservative approach has created a level playing field for investors to determine the dilutive effects of equity-based incentive programs.

Stockholders expect to receive benefits in exchange for issuing stock options. They want employees to work harder and increase the stock price. They expect earnings growth that outweighs equity dilution. Even if the shareholders "lose" on the value exchange and there is a net cost, it falls directly on shareholders as dilution and there is no cash cost to the company. We believe it is unfair to report the estimated cost without objectively evaluating the expected benefits.

## Valuing Employee Stock Options

No market prices exist for employee options because they cannot be accurately measured, freely traded, or hedged for risk. Investment bankers will not quote a hypothetical price for unadjusted, restricted employee stock options. The only viable method they have to value these options is to strip them of all restrictions so they resemble exchange-traded options.

No mathematical models exist to accurately value long-term employee stock options subject to trading restrictions, vesting restrictions, forfeiture, employment requirements, closed trading windows and black-out periods. It is impossible to predict employee exercise behavior and macroeconomic events.

The Board believes that binomial models can be modified for different nodes and time intervals to account for some of the unique characteristics of employee stock options.

However, existing binomial models were not designed for changing assumptions within a single binomial distribution, or recombining tree. They were intended to measure random changes over time using constant assumptions and risk neutral parameters. We expect there are no companies with the employee databases and statistical models required to extrapolate past behaviors for use in a binomial model.

Although binomial models can measure the value of exchange-traded options, there are serious technical flaws in using binomial models to value employee stock options. Real world conditions, if applied correctly, would violate key assumptions and parameters of binomial models. Since Black-Scholes is just a special case of binomial models (in continuous time), our observations are equally valid for the Black-Scholes Model.

# Ten Binomial Model Violations Posed by Employee Stock Options

**Violation 1.** <u>Risk neutrality</u>. Binomial models assume that option price variations between sub-divided time intervals can be perfectly hedged against risk by constructing a long position in the underlying stock and a short position in the risk-free bond (borrowing). In practice, employees cannot dynamically hedge their options. The inability of employees to hedge their options is a critical violation of the binomial model's assumption of the risk neutrality of options.

**Violation 2.** <u>Immediate hedgeability</u>. Binomial models assume that options are hedged from the very beginning of the option period. In practice, employees have no rights that can be hedged until the grant vests. The requirement for a lengthy holding period due to vesting restrictions is a violation of the binomial model's assumption of the immediate ability to hedge options.

Violation 3. Continuous exercisability. Binomial models assume that American-style options can be exercised at any time. In practice, employees can only exercise options after vesting in them AND during periods when the trading window is open. The vesting and unpredictable trading restrictions that accompany employee stock options are violations of the binomial model's assumption of continuous exercisability.

**Violation 4.** <u>Independent stock prices</u>. Binomial models assume future stock price movements are independent of everything, including the option holders' actions. In practice, the exercise of employee options, unlike exchange traded options, causes dilution. The dilution caused by the exercise of employee stock options is a violation of the binomial model's assumption of independent stock prices.

Violation 5. Random stock price movements. Binomial models implicitly assume future stock prices follow a stochastic process; i.e., the observed changes in stock price over time are random. This doesn't hold true for employee options because increased employee efforts can positively influence the stock price. The influence of non-random (positive) changes in stock price as a result of incentives from employee stock option plans is a violation of the binomial model's assumption of purely random stock prices.

Violation 6. Wealth maximization. Binomial models assume investors always seek to maximize their wealth and their risk preferences do not matter. In practice, employees maximize their own utility (i.e., their practical needs). They tend to exercise their options early because it is the only way to monetize their risky flow. They take into account personal, company and outside factors in making decisions to exercise options. The tendency for employees to maximize their own utility and exercise early is a violation of the binomial model's assumption of wealth maximization.

Violation 7. Lognormal distribution of returns. Binomial models assume a lognormal distribution of returns. In simple terms, as future stock prices follow a random process, for a given volatility and term, the logarithms of expected returns are assumed to be distributed normally and conform to the shape of a bell curve. In practice, historical data shows that stock prices are NOT lognormally distributed. Actual stock price distributions tend to be taller in the middle with fatter tails than the normal distribution. Significant fluctuations above and below the lognormal distribution of stock returns represent a serious violation of the binomial model's assumption of the lognormal distribution of stock returns. This is bound to produce an inaccurate option valuation.

Violation 8. <u>Volatility of future returns</u>. Commonly used, off-the-shelf binomial models assume the future level of a company's stock price volatility will remain constant. This single measure of future volatility is used to predict the distribution of stock returns for all future periods and strike prices. In practice, the implied volatilities of a company's exchange-traded options at different maturities are not constant. They are higher for out-of-the-money options vs. in-the-money options, and put options generally have higher volatilities than call options. The varying implied volatilities suggested by exchange traded options at different strike prices and maturities is a violation of the binomial model's assumption of the constant volatility of future returns.

Violation 9. Volatility of historical returns. Binomial models implicitly assume that a single volatility level applies throughout time (past and future). Historical analysis clearly doesn't support this assumption, and it cannot be used to reliably estimate future volatility. In open markets, traders will heavily discount the likelihood of long-term future volatility being as high as historical volatility. They don't want to overpay for the price of an option. The binomial model has no mechanism for discounting volatility in the long run. The Board's implementation guidance contains no such mechanism, either. The variations in historical and implied volatility and the practical need to discount volatility assumptions by increasing amounts in the future are violations of the binomial model's assumption of a single measure of volatility in past and future periods.

Violation 10. Market-based parameters. Binomial models assume a constant level of volatility that can be estimated using market-based parameters. In practice, short-term exchange-traded options are the only market-based indicator of the implied future stock price volatility. They extend into the future only 2-3 years with very thin trading volume, and they may not reflect efficient market pricing. Many public companies do not even have exchange-traded futures options on their stock. The inadequacy of short-term, exchange-traded options to predict the appropriate long-term volatility of employee stock

options for periods as long as 10 years is a violation of the binomial model's assumption of a constant volatility that can be estimated using market-based parameters.

## Summary

We would like to contribute to the Exposure Draft review process because (a) we have thoroughly studied the binomial model and the practical implications of applying it to employee stock options, and (b) we believe that each issue relevant to the practical application of the model needs to be addressed and resolved before implementation.

The main problem is that standard binomial models were not designed to value employee stock options. We are unaware of a binomial model that has been sufficiently modified to take into account different assumptions of volatility, dividends, risk-free rates, stock prices, and employee exercise behavior in a single distribution tree, or iteration. We would be strongly opposed if such a model exist but is proprietary and so complex that it might require new staff, new software, new databases, new audit services, and the payment of high fees for consulting and licensed usage solely for the purpose of reporting a hypothetical, non-cash estimate of expenses related to employee stock options.

Unless there is balanced, transparent, comprehensive analysis and discussion that leads to a general agreement on the relevant accounting theory and valuation methodology, we advocate continued use of the current version of FAS 123 because it allows investors to formulate their own value judgments based on information presented in supplemental footnote disclosure about equity incentive programs.