

Changes to the Expected Term and Forfeiture Rate Reports



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Agenda

- **Expected Term Reporting**
- **Forfeiture/Post-Vest % Rate Report**

Expected Term Reporting

Expected Term Calculations

What is it?

“The expected term of an employee share option or similar instrument is the period of time for which the instrument is expected to be outstanding (that is, the period of time from the service inception date to the date of expected exercise or other expected settlement).”

[Paragraph A27 from the FAS 123(R) Standard]

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Expected Term Calculations

How is it used?

“The expected term is an assumption in a closed-form model.”

- Example of a closed-form model:
Black-Scholes

[Paragraph A27 from the FAS 123(R) Standard]

Account Name	Option Date	Market Value	Shares	Price
Balboa, Rocky	2/15/2006	\$22.0000	6,250.0000	\$22.0000

ID	Type	Plan	Class	Number
66666	NQ	2004		001519

Selection | Valuation | Comment

Model: Black-Scholes | Approach: Single

Forecast: Q106 | Term in Years: 4.5

Vest Date	Value per Share
1	2/15/2010

Active

Save | Undo | Calculate

Expected Term Calculations

Why is it important?

- The Fair Value of **traded options** is based on contractual term because it is rarely advantageous to exercise before the contractual term
- However, holders of **employee share options** cannot sell (or hedge) their options – they can only exercise them
- Exercising prior to expiration terminates the options remaining time value; thus, the Fair Value of the employee share option is reduced
- **The Statement (Paragraphs A3 and A18) requires that the Fair Value of an employee share option be based on expected, rather than contractual, term**

Expected Term Calculations

“Option value increases at a decreasing rate as the term lengthens (for most, if not all, options). For example, a two-year option is worth less than twice as much as a one-year option, other things equal.”

- **This is the reason the Fair Value is different for each vest period where the “multiple” valuation approach is used for grants with graded vesting**

[Paragraph A30 from the FAS 123(R) Standard]

Expected Term Calculations

FASB's Guidance:

“...expected term might be estimated...taking into account whatever relevant and supportable information is available....”

[Paragraph A29 from the FAS 123(R) Standard]

Expected Term Reporting

- **New Report**
 - **Expected Term Analysis**
 - Lets you indicate Valuation Approach
 - Single Approach = Option Date
 - Multiple Approach = Vest Date
 - Calculates Actual Term for shares that are:
 - Exercised
 - Forfeited (cancelled before vest)
 - Expired (cancelled after vest)
 - Calculates Expected Term for shares that are outstanding based on % of Remaining Term input
 - Calculates “In the Money” value for shares that are outstanding

Expected Term Reporting

<COMPANY NAME>													
EXPECTED TERM ANALYSIS													
FROM: 1/1/2000 TO: 1/1/2003													
APPROACH: Single													
MARKET VALUE \$13.00													
% REMAINING TERM 50%													
Page: <PAGE>													
File: Expterm													
Date: <DATE>													
Time: <TIME>													
ID	Number	Shares Granted	Price (\$)	Grant Date	Vest Date	Expire Date	Term Type	Trans Shares	Trans Date	Minimum Term	Expected/ Actual Term	Maximum Term	% In the Money
A100	100	100.0000	10.000000	01/01/00	01/01/01	01/01/10	Exercised	90.0000	01/01/01		3.00		
A111	110	698.0000	5.000000	10/14/02	10/14/03	10/14/12	Exercised	174.0000	01/15/05		1.00		
				Term Type: Exercised				264.0000	Wgt. Avg.		1.68		
A100	101	50.0000	12.000000	01/01/01	01/01/02	06/01/11	Expired	50.0000	06/01/03		2.00		
				Term Type: Expired				50.0000	Wgt. Avg.		2.00		
A100	102	75.0000	13.000000	01/01/01	01/01/03	06/01/11	Forfeited	75.0000	06/01/02		2.00		
A112	1111	100.0000	8.000000	01/01/03	01/01/04	01/01/13	Forfeited	100.0000	05/15/03		1.00		
A112	1111	100.0000	8.000000	01/01/03	01/01/05	01/01/13	Forfeited	100.0000	05/15/03		2.00		
				Term Type: Forfeited				275.0000	Wgt. Avg.		1.64		
A100	100	100.0000	10.000000	01/01/00	01/01/01	01/01/10	Outstanding	10.0000	01/01/03	3.00	6.51	10.01	30.000
A111	110	698.0000	5.000000	10/14/02	10/14/05	10/14/12	Outstanding	524.0000	10/14/05	3.00	6.51	10.01	160.000
				Term Type: Outstanding				534.0000	Wgt. Avg.	3.00	6.51	10.01	
TOTALS								1123.0000					
Weighted Average including Forfeited											3.98		
Weighted Average excluding Forfeited											4.74		

Expected Term Reporting

- **New Report**
 - **One row per vesting period per transaction**
 - Monthly or daily vesting will result in a long report
 - **Groups by Term Type**
 - Exercised, Expired, Forfeited, Outstanding
 - **Calculates weighted average (including and excluding Forfeitures) term**
 - **Regrant (or reprice) is considered a cancellation**
 - Some valuation experts would exclude
 - Because grants may have associated exercises, report includes
 - If you wish to exclude them, filter the report based on Cancel Reason

Expected Term Reporting

- **New Report**
 - **Shares exercised before vest are considered outstanding until vest date**
 - **As with accounting and disclosure, options are considered outstanding until both vest & exercise have occurred (in any order)**
 - **Partial exercises split into two transactions: an exercise transaction and an outstanding transaction**

Expected Term Reporting

Report - Run

Report Title: Expected Term Analysis

Begin Date: [] End Date: []

Valuation Approach: Single

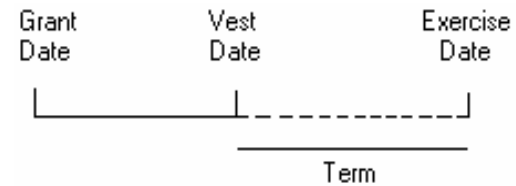
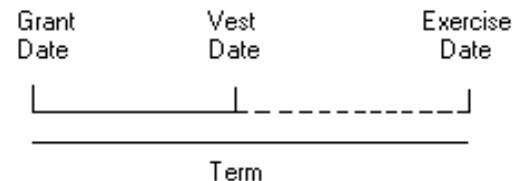
Market Value: [] % of Remaining Term: 50.000

+ Advanced Reporting

Print Print Preview Undo Close Reset Filter

■ Valuation Approach

- If you select **Single**, calculates term from grant date
- If you select **Multiple**, calculates term from vest date



Expected Term Reporting

Report - Run

Report Title	Begin Date	End Date	Valuation Approach
Expected Term Analysis			Single
Market Value	% of Remaining Term		
	50.000		

+ Advanced Reporting

Print Print Preview Undo Close Reset Filter

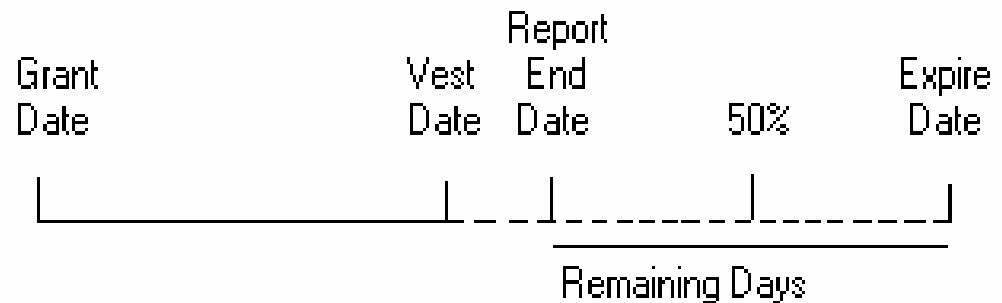
- **% of Remaining Term**
 - Value from 0.000 to 100.000 (default is 50.000)
 - Used to calculate expected term for outstanding shares

Expected Term Reporting

Expected Term Calculation Example

- **Calculate Total Remaining Days**

- Time from later of Vest Date or Report End Date to Expire Date



- **Multiply by % of Remaining Days value (assume 50%)**

Single Approach Expected Term

Multiple Approach Expected Term

- **Add this value to:**

- **For Single:**

- Time from Grant Date to Vest Date

- **For Multiple:**

- Time from Vest Date

Expected Term Reporting

▪ Minimum Term

- Report End Date is before Vest Date (i.e., not vested)
 - *For Single:*
 - Time from Grant Date to Vest Date
 - *For Multiple:*
 - 0
- Report End Date is after Vest Date (i.e., vested)
 - *For Single:*
 - Time from Grant Date to Report End Date
 - *For Multiple:*
 - Time from Vest Date to Report End Date

Expected Term Reporting

- **Maximum Term**

- *For Single:*

- Time from Grant Date to Expire Date

- *For Multiple:*

- Time from Vest Date to Expire Date

- **% In the Money**

- $(\text{Market Value} - \text{Price}) / \text{Price}$

Expected Term Reporting

<COMPANY NAME>														
EXPECTED TERM ANALYSIS														
FROM: 1/1/2000 TO: 1/1/2003														
APPROACH: Single														
MARKET VALUE \$13.00														
% REMAINING TERM 50%														
Page: <PAGE>														
File: Expterm														
Date: <DATE>														
Time: <TIME>														
ID	Number	Shares Granted	Price (\$)	Grant Date	Vest Date	Expire Date	Term Type	Trans Shares	Trans Date	Minimum Term	Expected/ Actual Term	Maximum Term	% In the Money	
A100	100	100.0000	10.000000	01/01/00	01/01/01	01/01/10	Exercised	90.0000	01/01/01		3.00			
A111	110	698.0000	5.000000	10/14/02	10/14/03	10/14/12	Exercised	174.0000	01/15/05		1.00			
Term Type: Exercised								264.0000	Wgt. Avg.		1.68			
A100	101	50.0000	12.000000	01/01/01	01/01/02	06/01/11	Expired	50.0000	06/01/03		2.00			
Term Type: Expired								50.0000	Wgt. Avg.		2.00			
A100	102	75.0000	13.000000	01/01/01	01/01/03	06/01/11	Forfeited	75.0000	06/01/02		2.00			
A112	1111	100.0000	8.000000	01/01/03	01/01/04	01/01/13	Forfeited	100.0000	05/15/03		1.00			
A112	1111	100.0000	8.000000	01/01/03	01/01/05	01/01/13	Forfeited	100.0000	05/15/03		2.00			
Term Type: Forfeited								275.0000	Wgt. Avg.		1.64			
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A111	110	698.0000	5.000000	10/14/02	10/14/05	10/14/12	Outstanding	524.0000	10/14/05	3.00	6.51	10.01	160.000	
Term Type: Outstanding								534.0000	Wgt. Avg.	3.00	6.51	10.01		
TOTALS								1123.0000						
Weighted Average including Forfeited											3.98			
Weighted Average excluding Forfeited											4.74			

Forfeiture/Post-Vest % Rate Report

Forfeiture Calculation

What is it?

“An entity shall base initial accruals of compensation cost on the estimated number of instruments for which the requisite service is expected to be rendered. The estimate should be revised if subsequent information indicates that the actual number of instruments is likely to differ from previous instruments”.

[Paragraph 43 from the FAS 123(R) Standard]

Forfeiture Calculation

How is it used?

The Forfeiture Rate can be used to “haircut” period expense recorded by the company on the Expense Allocation – Recognition report

EXPENSES																		ADJUSTMENTS	
Number	Date	Date	Days	Per	(%)	Expense (\$)	Prior Days	Prior Expense (\$)	To Date Days	To Date Expense (\$)	Unadjusted Current Period Expense (\$)	Unamortized Expense (\$)	To Date Recognized Expense (\$)	Cancel Date	Vested Shares Recognized Expense (\$)	Current Period Adjustment (\$)			
001513	05/03/04	05/03/08	1,461		92.33	30,351.90	972	20,193.05	1,062	22,062.77	1,869.72	8,289.13	9,431.73		0.00	0.00			

EXPENSE ALLOCATION - RECOGNITION
 FROM 1/1/2007 TO 3/31/2007
 FORFEITURE RATE: 5%
 PRIOR FORFEITURE RATE: 5%
 SINGLE USE WGT AVG RATE: Yes
 SINGLE APPROACH METHOD: Straight Line
 REPORT TYPE: All
 REPORT VIEW: Summary
 ESTIMATE ONLY: No

Page: 1
 File: EXPNSREC
 Date: 4/23/2007
 Time: 10:31:47 AM

Forfeiture Calculation

Why is it important?

- The company gets to reduce the amount of expense they recognize by the forfeiture rate
- The company can reverse any previously recognized expense for shares that never vest
- The company cannot reverse any previously recognized expense for vested shares that expire unexercised
- **The Statement (Paragraphs A43 and A45) requires that the recognized compensation cost of an employee share option be based on the number of instruments for which the requisite service has been rendered**

Post-Vest % Calculation

What is it?

- The rate at which employees are likely to terminate and therefore exercise earlier

How is it used?

- Used in Equity Edge Binomial Valuation

The screenshot shows the 'Valuation - New Stack' window with the following data:

Account Name	Option Date	Market Value	Shares	Price
Balboa, Rocky	2/15/2006	\$22.0000	6,250.0000	\$22.0000

ID	Type	Plan	Class	Number
66666	NQ	2004		001519

Selection: Valuation | Comment

Model	Approach
Equity Edge Binomial	Multiple

Forecast	Exercise Factor	Post-Vest %	Est. Steps
Q106	2.4051	56.5900	300

Vest Date	Value per Share
1 2/15/2007	
2 2/15/2008	
3 2/15/2009	
4 2/15/2010	

Active

Buttons: Save, Undo, Calculate

Forfeiture/Post-Vest % Rate Report

- **History is just a Starting Point**
 - **Need to assess experience**
 - **How does it deviate from historical?**
 - **Evaluate**
 - **Percentage “In the Money”**
 - **Demographics**

Forfeiture/Post-Vest % Rate Report

- **New Report**
 - **New Name**
 - **Completely re-designed to better meet client's needs**
 - **Pulls a group of grants with grant date within report range**
 - **Evaluates what happened to grants over time (until date report is run)**
 - **Evaluates data at grant level**
 - **Calculates Forfeiture and Post-Vest % separately**

Forfeiture/Post-Vest % Rate

- **Detail section**
 - **Auditable information pertaining to each grant**
 - **One line for each grant**
 - **Show Detail checkbox added to Report Run Window**
 - **Displays one line item per each vesting period**
 - **Monthly or daily vesting will result in a long report**
 - **Total Shares Granted, Avg. Time to Vest, and Avg. Time to Cancel displayed on grant line**

Forfeiture/Post-Vest % Rate

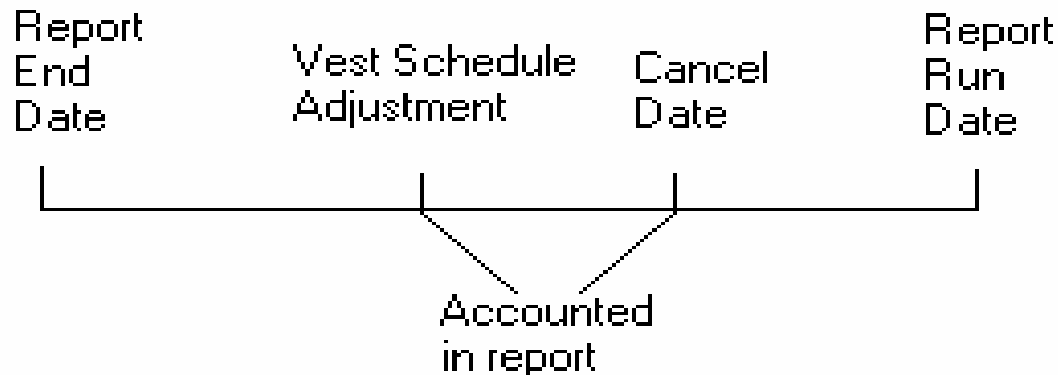
- **Annual Summary**
 - **Contains Aggregate & Annual Forfeiture and Post-Vest% Rate calculations**
 - **Forfeiture rate can be used to “haircut” period expense recorded by the company on the Expense Allocation – Recognition report**
 - **Post-Vest rate can be used as an input for the Equity Edge Binomial model**
 - **Always grouped by year**
 - **Contains values necessary to audit calculations**

Forfeiture/Post-Vest % Rate

- **Re-grant (or re-price) is not considered a Forfeiture/Cancellation**
 - **Shares are not technically forfeited**
 - **Shares do not have a grace period during which they can be exercised**
- **Report will exclude**
 - **Inactive grants**
 - **Grants with Expire Date before Vest Date**

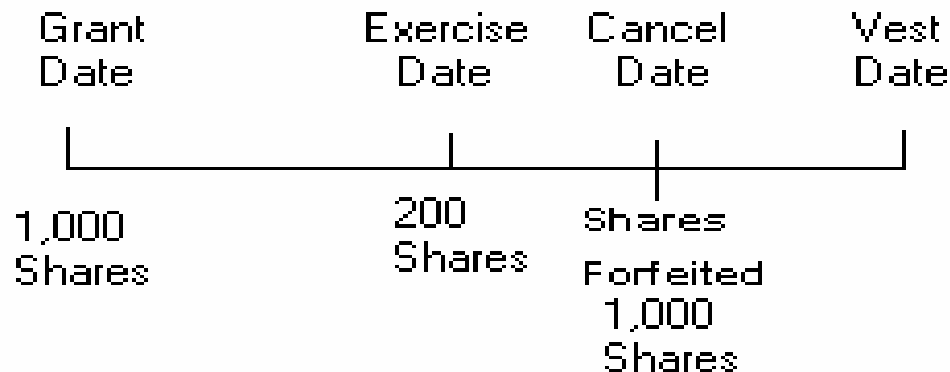
Forfeiture/Post-Vest % Rate

- **Uses vest schedule in effect on the Report Run Date**
- **Changes made after Report End Date and before Report Run Date are considered in the calculation**



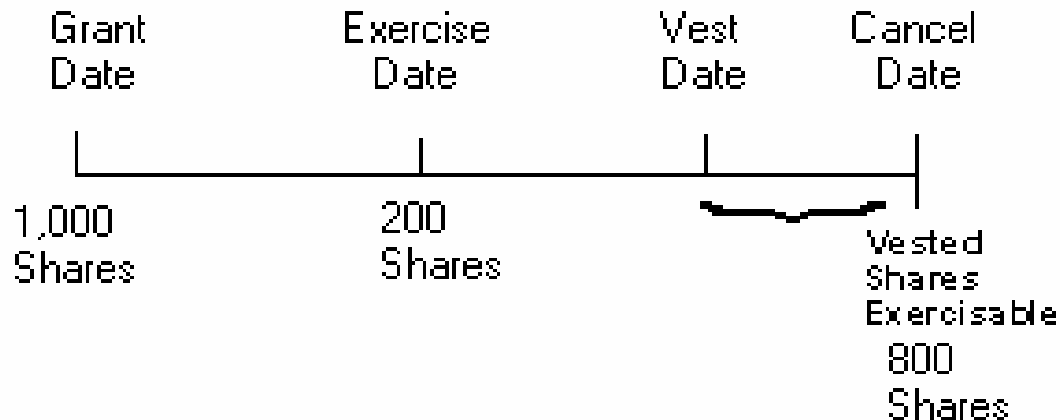
Forfeiture/Post-Vest % Rate

- **Shares exercised before vest are considered unvested until vest date**
 - Cancellations prior to vest are included in the Forfeiture Rate calculation
 - All shares in vesting period, including those exercised before vest, are considered Forfeited



Forfeiture/Post-Vest % Rate

- Cancellation after vest (due to termination) are included in the Post-Vest % Rate calculation
 - Vested Shares Exercisable is reduced by Shares exercised before vest



Forfeiture/Post-Vest % Rate

The screenshot shows a 'Report - Run' dialog box with the following fields and controls:

- Report Title:** A dropdown menu with 'Forfeiture/Post-Vest % Rates' selected.
- Begin Date:** A text box containing '1/1/2003'.
- End Date:** A text box containing '12/31/2006'.
- Save Report Data:** An unchecked checkbox.
- Report Type:** A dropdown menu with 'All' selected.
- Show Detail:** A checkbox that is currently unchecked and is circled in red.
- Advanced Reporting:** A button with a plus sign and the text 'Advanced Reporting'.
- Buttons:** 'Print', 'Print Preview', 'Undo', and 'Close' buttons at the bottom.

▪ Report Run Window

- **Begin Date & End Date** determine which grants are evaluated
- **Select Show Detail** checkbox to display one line for each vesting period
- **Clear Show Detail** checkbox to display one line per grant

Forfeiture/Post-Vest % Rate

- **Forfeiture Rate Analysis - Details**
 - **Evaluates all cancellations for grants within report range**
 - **All shares with cancel date after report begin date**
 - **Calculates a Wgt. Average Time to Vest for each grant**
 - **Calculates Unvested Shares Forfeited for each grant**

Forfeiture/Post-Vest % Rate

<COMPANY NAME>

FORFEITURE / POST-VEST % RATES

FROM 1/1/2003 TO 12/31/2006

REPORT TYPE : All

SHOW DETAIL: No

Page: <PAGE>

File: Forfeit

Date: <DATE>

Time: <TIME>

ID	Number	Type	Grant Date	Shares Granted	Vest Date	Vesting Template	Time to Vest	Cancel Date	Unvested Shares Forfeited	Vest Cancel Date	Time to Cancel	Vested Shares Exercisable
10087	001247	RSU	03/17/03	5,000,000	03/17/05	3yr 33%	1.999800	12/25/05	1,666,000			
10087	001478	NQ	07/15/03	5,000,000	07/15/07	4yr 25% pe ryr	2.500000	12/25/05	2,500,000	01/24/05	2.528767	2,500,000
10087	001479	NQ	11/04/04	3,500,000	11/04/08	4yr monthly	2.154816	12/25/05	2,652,000	01/24/05	1.221918	948,000
10087	001480	ISO	02/17/05	1,500,000	02/17/08	3 yr cliff	3.000000	12/25/05	1,500,000	01/24/05	0.934247	0,000
10090	001488	NQ	11/10/04	5,000,000	11/10/08	4yr 25% pe ryr	2.500000	02/28/06	3,750,000	03/30/05	1.363662	1,250,000
10091	001487	NQ	06/04/04	3,000,000	06/04/07	3 yr cliff	3.000000		0,000			0,000
10091	001506	RSU	06/01/05	3,000,000	06/01/08	3yr 33%	2.000000		0,000			0,000
10091	001509	NQ	01/04/05	2,000,000	01/04/09	4yr 25% pe ryr	2.500000		0,000			0,000
10091	001531	ISO	01/02/05	1,000,000	01/02/10	4yr 25% pe ryr	2.500000		0,000			0,000
Totals				29,000,0000					11,968,0000			4,698,0000

- Time to Vest
 - Value used in calculation of Average Vest Period in Annual Summary section of the report
- Cancel Date
- Unvested Shares Forfeited

Forfeiture/Post-Vest % Rate

- **Forfeiture Rate Analysis - Annual Summary**
 - **One line for any year that has at least one day within the report range**
 - **Aggregate Forfeiture Rate**
 - **Total Unvested Shares for the group divided by Total Shares Granted for the group**
 - **Annual Forfeiture Rate**
 - **Aggregate rate Annualized over the Average Vest Period**

Forfeiture/Post-Vest % Rate

<COMPANY NAME>

FORFEITURE / POST-VEST % RATES

FROM 1/1/2003 TO 12/31/2006

REPORT TYPE : All

SHOW DETAIL: No

Page: <PAGE>

File: Forfeit

Date: <DATE>

Time: <TIME>

ANNUAL SUMMARY

Year	Total Shares Granted	Total Unvested Shares Forfeited	Average Vest Period	Aggregate Forfeiture Rate %	Annual Forfeiture Rate %	Total Vested Shares Exercisable	Vested Shares Wgt. Time to Vest	Aggregate Post-Vest % Rate	Wgt. Avg Time to Cancel	Annual Post-Vest % Rate
2003	10,000.00	4,166.00	1.374800	41.66	32.43	2,500.00	1.500000	100.00	2.528767	100.00
2004	11,500.00	6,302.00	1.551118	54.80	40.07	2,198.00	1.002730	42.29	1.313845	82.91
2005	6,500.00	1,500.00	0.692308	23.08	31.54	0.00	0.000000	0.00	0.000000	0.00
2006	1,000.00	0.00	0.000000	0.00	0.00	0.00	0.000000	0.00	0.000000	0.00
Total	29,000.00	11,968.00	1.244340	41.27	34.80	4,698.00	1.267348	43.91	1.960355	56.59

- Total Unvested Shares Forfeited
- Average Vest Period
 - Value Calculated – Wgt Average length of time to vest for the Unvested Shares Forfeited
- Aggregate Forfeiture Rate %
- Annual Forfeiture Rate %
 - Aggregate rate annualized over the Average Vest Period
 Example: $1 - ((1 - 0.5080) ^ (1/1.551118)) = 40.07\%$

Forfeiture/Post-Vest % Rate

- **Post-Vest % Rate Analysis - Details**
 - **Evaluates all Vested Shares Exercisable for grants within report range**
 - **Shares for terminated employees with a “grace period”**
 - **Excludes shares not related to termination (e.g. re-grants)**
 - **Using the Vest Cancel Date calculates an Wgt. Average Time to Cancel for each grant**
 - **Calculates Vested Shares Exercisable for each grant**

Forfeiture/Post-Vest % Rate

<COMPANY NAME>

FORFEITURE / POST-VEST % RATES

FROM 1/1/2003 TO 12/31/2006

REPORT TYPE : All

SHOW DETAIL: No

Page: <PAGE>

File: Forfeit

Date: <DATE>

Time: <TIME>

ID	Number	Type	Grant Date	Shares Granted	Vest Date	Vesting Template	Time to Vest	Cancel Date	Unvested Shares Forfeited	Vest Cancel Date	Time to Cancel	Vested Shares Exercisable
10087	001247	RSU	03/17/03	5,000,000	03/17/05	3yr 33%	1.999800	12/25/05	1,666,000			
10087	001478	NQ	07/15/03	5,000,000	07/15/07	4yr 25% per yr	2.500000	12/25/05	2,500,000	01/24/05	2.528767	2,500,000
10087	001479	NQ	11/04/04	3,500,000	11/04/08	4yr monthly	2.154816	12/25/05	2,552,000	01/24/05	1.221918	948,000
10087	001480	ISO	02/17/05	1,500,000	02/17/08	3 yr cliff	3.000000	12/25/05	1,500,000	01/24/05	0.934247	0,000
10090	001488	NQ	11/10/04	5,000,000	11/10/08	4yr 25% per yr	2.500000	02/28/06	3,750,000	03/03/05	1.383562	1,250,000
10091	001487	NQ	03/04/04	3,000,000	03/04/07	3 yr cliff	3.000000		0,000			0,000
10091	001506	RSU	05/01/05	3,000,000	05/01/08	3yr 33%	2.000000		0,000			0,000
10091	001509	NQ	01/04/05	2,000,000	01/04/09	4yr 25% per yr	2.500000		0,000			0,000
10091	001531	ISO	01/02/06	1,000,000	01/02/10	4yr 25% per yr	2.500000		0,000			0,000
Totals				29,000,0000					11,968,0000			4,698,0000

- Vest Cancel Date – Date vested shares were cancelled
- Time to Cancel
 - Value used in calculation of Wgt. Average Time to Cancel in Annual Summary section of the report
- Vested Shares Exercisable

Forfeiture/Post-Vest % Rate

- **Post-Vest % Rate Analysis - Annual Summary**
 - **One line for any year that has at least one day within the report range**
 - **Aggregate Post-Vest % Rate**
 - **Total Vested Shares Exercisable for the group divided by Total Option Shares Granted minus Total Unvested Option Shares Forfeited for the group**
 - **Annual Post-Vest % Rate**
 - **Aggregate rate Annualized over the Average Grace Period**

Forfeiture/Post-Vest % Rate

<COMPANY NAME>

FORFEITURE / POST-VEST % RATES

FROM 1/1/2003 TO 12/31/2006

REPORT TYPE : All

SHOW DETAIL: No

Page: <PAGE>

File: Forfeit

Date: <DATE>

Time: <TIME>

ANNUAL SUMMARY

Year	Total Shares Granted	Total Unvested Shares Forfeited	Average Vest Period	Aggregate Forfeiture Rate %	Annual Forfeiture Rate %	Total Vested Shares Exercisable	Vested Shares Wgt. Time to Vest	Aggregate Post-Vest % Rate	Wgt. Avg Time to Cancel	Annual Post-Vest % Rate
2003	10,000.00	4,166.00	1.374800	41.66	32.43	2,500.00	1.500000	100.00	2.528767	100.00
2004	11,500.00	6,302.00	1.551118	54.80	40.07	2,198.00	1.002730	42.29	1.313845	82.91
2005	6,500.00	1,500.00	0.692308	23.08	31.54	0.00	0.000000	0.00	0.000000	0.00
2006	1,000.00	0.00	0.000000	0.00	0.00	0.00	0.000000	0.00	0.000000	0.00
Total	29,000.00	11,968.00	1.244340	41.27	34.80	4,698.00	1.267348	43.91	1.960355	56.59

- Total Vested Shares Exercisable
 - Vested Shares Wgt. Time to Vest - Weighted average length of time to vest
 - Aggregate Post-Vest % Rate
 - Wgt. Avg Time to Cancel – Weighted average length of time to cancel
 - Annual Post-Vest % Rate
 - Aggregate Rate annualized over the Average Grace Period
- Example: $1 - ((1 - 0.4229) ^ (1 / (1.313845 - 1.002730))) = 82.91\%$

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