

Successful Entrepreneurship for Microsystems

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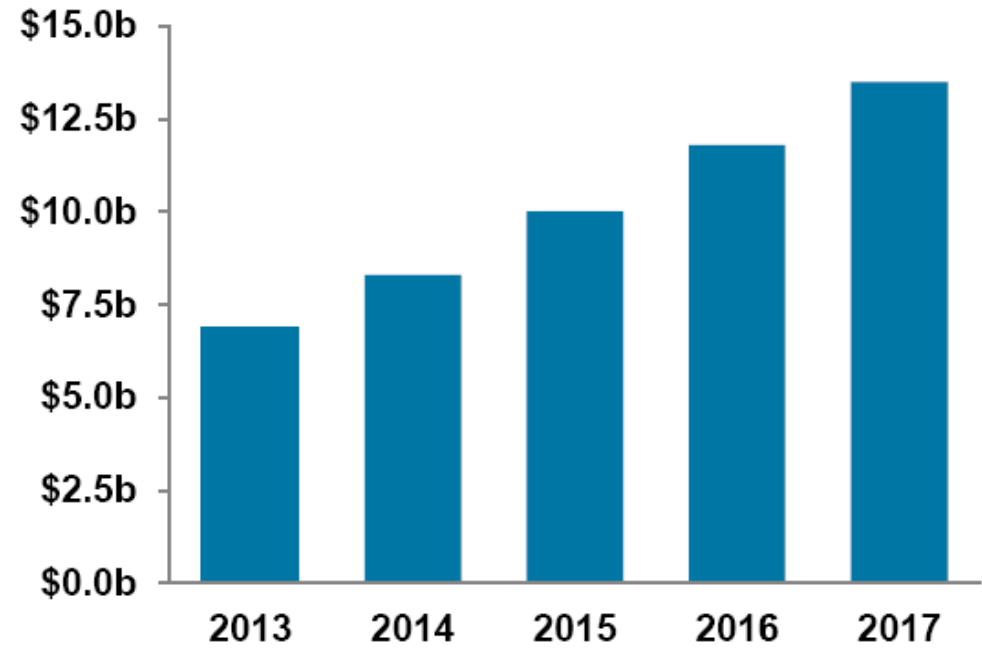
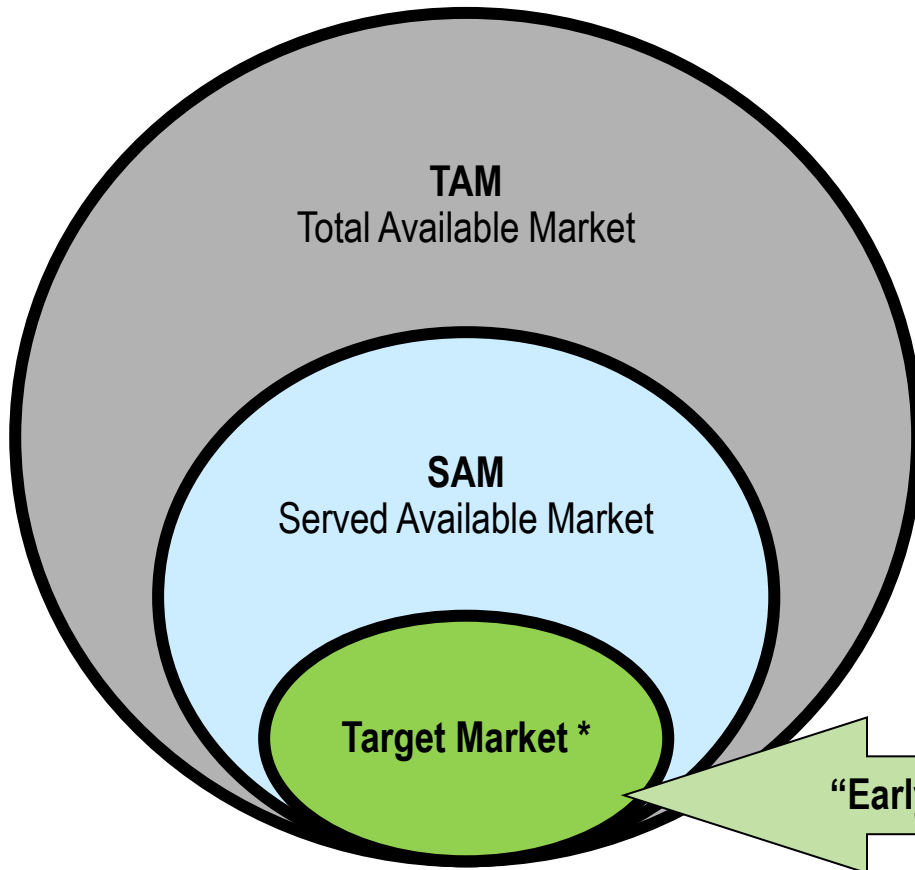
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Course presented at UCSD CSE 190, Spring Quarter 2015

Marketing "101"

Mobile Device RF TAM

~15% CAGR



Source: RFMD Analyst Day 41118

* "SOM"
Served Obtainable Market

Ref: Wikipedia

Financials “101”

- Income Statement
- Balance Sheet
- Dilution

<http://news.yahoo.com/yourselfers-inspire-hardware-renaissance-silicon-valley-152815608--sector.html>

INCOME STATEMENT

PERIOD ENDING

Total Revenue

Cost of Revenue

Gross Profit

Operating Expenses

Research Development

Selling General and Administrative

Non Recurring

Others

Total Operating Expenses

Operating Income or Loss

Income from Continuing Operations

Total Other Income/Expenses Net

Earnings Before Interest And Taxes (EBIT)

Interest Expense

Income Before Tax

Income Tax Expense

Minority Interest

Net Income From Continuing Ops

Non-recurring Events

Discontinued Operations

Extraordinary Items

Effect Of Accounting Changes

Other Items

Net Income

Preferred Stock And Other Adjustments

Net Income Applicable To Common Shares

INTEL INCOME STATEMENT			
	ANNUAL		
PERIOD ENDING	28-Dec-13	29-Dec-12	31-Dec-11
Total Revenue	52,708,000	53,341,000	53,999,000
Cost of Revenue	21,187,000	20,190,000	20,242,000
Gross Profit	31,521,000	33,151,000	33,757,000
Operating Expenses			
Research Development	10,611,000	10,148,000	8,350,000
Selling General and Administrative	<u>8,088,000</u>	<u>8,057,000</u>	<u>7,670,000</u>
Total Operating Expenses	19,014,000	18,513,000	16,280,000
Operating Income or Loss	12,291,000	14,638,000	17,477,000
Earnings Before Interest And Taxes (EBIT)	12,611,000	14,873,000	17,781,000
Interest Expense	-	-	-
Income Before Tax	12,611,000	14,873,000	17,781,000
Income Tax Expense	2,991,000	3,868,000	4,839,000
Net Income From Continuing Ops	10,091,000	11,146,000	13,054,000
Net Income	9,620,000	11,005,000	12,942,000
Preferred Stock And Other Adjustments	-	-	-
Net Income Applicable To Common Shares	9,620,000	11,005,000	12,942,000

Ref: <http://finance.yahoo.com/q/is?s=INTC+Income+Statement&annual>

Success elements – funding

INTEL INCOME STATEMENT			
	ANNUAL		
PERIOD ENDING	28-Dec-13	29-Dec-12	31-Dec-11
Total Revenue	52,708,000	53,341,000	53,999,000
Cost of Revenue	21,187,000	20,190,000	20,242,000
Gross Profit	31,521,000	33,151,000	33,757,000
Gross Margin	59.8%	62.1%	62.5%
Operating Expenses			
Research Development	10,611,000	10,148,000	8,350,000
R&D %	20.1%	19.0%	15.5%
Selling General and Administrative	8,088,000	8,057,000	7,670,000
Total Operating Expenses	19,014,000	18,513,000	16,280,000
Operating Income or Loss	12,291,000	14,638,000	17,477,000
Profit Margin	23.3%	27.4%	32.4%
Earnings Before Interest And Taxes (EBIT)	12,611,000	14,873,000	17,781,000
Interest Expense	-	-	-
Income Before Tax	12,611,000	14,873,000	17,781,000
Income Tax Expense	2,991,000	3,868,000	4,839,000
Net Income From Continuing Ops	10,091,000	11,146,000	13,054,000
Net Income	9,620,000	11,005,000	12,942,000
Preferred Stock And Other Adjustments	-	-	-
Net Income Applicable To Common Shares	9,620,000	11,005,000	12,942,000
Net Profit Margin	18.3%	20.6%	24.0%

FACEBOOK INCOME STATEMENT		ANNUAL	
		31-Dec-13	31-Dec-12
PERIOD ENDING			
Total Revenue		7,872	5,089
Cost of Revenue		1,875	1,364
Gross Profit		5,997	3,725
	Gross Margin	76.2%	73.2%
Operating Expenses			
Research Development		1,415	1,399
	R&D %	18.0%	27.5%
Selling General and Administrative		<u>1,778</u>	<u>1,788</u>
Total Operating Expenses		3,193	3,187
Operating Income or Loss		2,804	538
	Profit Margin	35.6%	10.6%
Earnings Before Interest And Taxes (EBIT)		2,810	545
Interest Expense		56	51
Income Before Tax		2,754	494
Income Tax Expense		1,254	441
Net Income		1,491	32
Preferred Stock And Other Adjustments		-	-
Net Income Applicable To Common Shares		1,491	32
	Net Profit Margin	18.9%	0.6%

ENTROPIC INCOME STATEMENT			
	ANNUAL		
PERIOD ENDING	31-Dec-13	31-Dec-12	31-Dec-12
Total Revenue	259,376	321,678	240,628
Cost of Revenue	134,974	157,675	107,922
Gross Profit	124,402	164,003	132,706
Gross Margin	48.0%	51.0%	55.1%
Operating Expenses			
Research Development	114,536	98,353	60,065
R&D %	44.2%	30.6%	25.0%
Selling General and Administrative	47,297	50,787	32,137
Total Operating Expenses	165,839	152,612	-
Operating Income or Loss	-41,437	11,391	40,504
Profit Margin	-16.0%	3.5%	16.8%
Income from Continuing Operations			
Total Other Income/Expenses Net	-3198	601	904
Earnings Before Interest And Taxes (EBIT)	-45,750	8,677	40,617
Interest Expense			
Income Before Tax	-45,750	8,677	40,617
Income Tax Expense	20,404	4,157	14,053
Net Income	-66,154	4,520	26,564
Preferred Stock And Other Adjustments	-	-	-
Net Income Applicable To Common Share	-66,154	4,520	26,564
Net Profit Margin	-25.5%	1.4%	11.0%

BALANCE SHEET

- INTEL

Assets

Period Ending	28-Dec-13	29-Dec-12	31-Dec-11
Assets			
Current Assets			
Cash And Cash Equivalents	5,674,000	8,478,000	5,065,000
Short Term Investments	14,413,000	9,684,000	9,772,000
Net Receivables	6,176,000	5,950,000	5,350,000
Inventory	4,172,000	4,734,000	4,096,000
Other Current Assets	1,649,000	2,512,000	1,589,000
Total Current Assets	32,084,000	31,358,000	25,872,000
Long Term Investments	7,694,000	4,917,000	1,451,000
Property Plant and Equipment	31,428,000	27,983,000	23,627,000
Goodwill	10,513,000	9,710,000	9,254,000
Intangible Assets	5,150,000	6,235,000	6,267,000
Accumulated Amortization	-	-	-
Other Assets	5,489,000	4,148,000	4,648,000
Deferred Long Term Asset Charges	-	-	-
Total Assets	92,358,000	84,351,000	71,119,000

BALANCE SHEET

- INTEL

Liabilities

Period Ending	28-Dec-13	29-Dec-12	31-Dec-11
Liabilities			
Current Liabilities			
Accounts Payable	11,191,000	10,654,000	9,852,000
Short/Current Long Term Debt	281,000	312,000	247,000
Other Current Liabilities	2,096,000	1,932,000	1,929,000
Total Current Liabilities	13,568,000	12,898,000	12,028,000
Long Term Debt	13,165,000	13,136,000	7,084,000
Other Liabilities	2,972,000	3,702,000	3,479,000
Deferred Long Term Liability Charges	4,397,000	3,412,000	2,617,000
Minority Interest	-	-	-
Negative Goodwill	-	-	-
Total Liabilities	34,102,000	33,148,000	25,208,000
Stockholders' Equity			
Misc Stocks Options Warrants	-	-	-
Redeemable Preferred Stock	-	-	-
Preferred Stock	-	-	-
Common Stock	21,536,000	19,464,000	17,036,000
Retained Earnings	35,477,000	32,138,000	29,656,000
Treasury Stock	-	-	-
Capital Surplus	-	-	-
Other Stockholder Equity	1,243,000	-399,000	-781,000
Total Stockholder Equity	58,256,000	51,203,000	45,911,000
Net Tangible Assets	42,593,000	35,258,000	30,390,000

“Dilution”

...assuming a Single Founder

	FOUNDER	INVESTOR			
		"ACCELERATOR "	"ANGEL"	"VENTURE CAPITAL" Round 1 ("Series A")	"VENTURE CAPITAL" Round 2 ("Series B")
Typical INVESTMENT:		\$20-50K	\$0.1MM - 0.8MM	\$1 - 10MM	\$1 - 10MM
Typical EQUITY:		5%	10% - 20%	25% - 35%	25% - 35%
<i>Assumption:</i>		5%	20%	30%	30%
INITIAL	100%				
After Accelerator Invest	95%	5%			

“Dilution” – After Angel Investment

	FOUNDER	INVESTOR			
		"ACCELERATOR "	"ANGEL"	"VENTURE CAPITAL" Round 1 ("Series A")	"VENTURE CAPITAL" Round 2 ("Series B")
Typical INVESTMENT:		\$20-50K	\$0.1MM - 0.8MM	\$1 - 10MM	\$1 - 10MM
Typical EQUITY:		5%	10% - 20%	25% - 35%	25% - 35%
<i>Assumption:</i>		5%	20%	30%	30%
INITIAL	100%				
After Accelerator Invest	95%	5%			
After ANGEL Invest	76%	4%	20%		

“Dilution” – After VC Series A Investment

	FOUNDER	INVESTOR			
		"ACCELERATOR "	"ANGEL"	"VENTURE CAPITAL" Round 1 ("Series A")	"VENTURE CAPITAL" Round 2 ("Series B")
Typical INVESTMENT:		\$20-50K	\$0.1MM - 0.8MM	\$1 - 10MM	\$1 - 10MM
Typical EQUITY:		5%	10% - 20%	25% - 35%	25% - 35%
<i>Assumption:</i>		5%	20%	30%	30%
INITIAL	100%				
After Accelerator Invest	95%	5%			
After ANGEL Invest	76%	4%	20%		
After VC Invest "A"	53%	3%	14%	30%	

“Dilution” – After VC Series A and Series B Investment

	FOUNDER	INVESTOR			
		"ACCELERATOR "	"ANGEL"	"VENTURE CAPITAL" Round 1 ("Series A")	"VENTURE CAPITAL" Round 2 ("Series B")
Typical INVESTMENT:		\$20-50K	\$0.1MM - 0.8MM	\$1 - 10MM	\$1 - 10MM
Typical EQUITY:		5%	10% - 20%	25% - 35%	25% - 35%
<i>Assumption:</i>		5%	20%	30%	30%
INITIAL	100%				
After Accelerator Invest	95%	5%			
After ANGEL Invest	76%	4%	20%		
After VC Invest "A"	53%	3%	14%	30%	
After VC Invest "B"	37%	2%	10%	21%	30%

“Dilution” – After VC Series A and Series B Investmentif there was a “Employee Stock Option Pool (ESOP)”

	FOUNDER	"Option Pool"	INVESTOR			
			"ACCELERATOR"	"ANGEL"	"VENTURE CAPITAL" Round 1 ("Series A")	"VENTURE CAPITAL" Round 2 ("Series B")
Typical INVESTMENT:			\$20-50K	\$0.1MM - 0.8MM	\$1 - 10MM	\$1 - 10MM
Typical EQUITY:			5%	10% - 20%	25% - 35%	25% - 35%
Assumption:		10%	5%	20%	30%	30%
INITIAL	90%	10%				
After Accelerator Invest	86%	10%	5%			
After ANGEL Invest	68%	8%	4%	20%		
After VC Invest "A"	48%	5%	3%	14%	30%	
After VC Invest "B"	34%	4%	2%	10%	21%	30%

What if there were 3 Founders?

Number of Founders considerations

- If 3 Founders, each will have ~11% after Series A and B
- Single Founder
 - Frowned upon by VC community
 - Additional skill sets needed
 - Could make a go for a while, then take on additional co-founder(s)
 - Split 80/20

Equity Payout Hierarchy

- Upon Exit (e.g., Acquisition)
 - Debts owed to banks or other investors
 - Preferred Stock held by investors
 - Common Stock held by Founders and ESOP

- Typical preferences of Preferred Stock
 - Conditions on future dilutions
 - Priority during payouts
 - Options to invest in future rounds
 - Convertible to Common Stock

Ref:

www.gabrielweinberg.com/blog/

<http://brandalyzer.wordpress.com/2014/01/24/how-start-up-equity-dilution-works/>

Business Plan Financial Summary Example

In US Dollars (December)	2002 E	2003 E	2004 E	2005 E
Revenues				
License	-	3,750,000	7,100,000	6,700,000
Customization and Integration	-	375,000	710,000	670,000
Silicon	-	5,115,600	52,617,250	115,552,878
Total Revenues	-	9,240,600	60,402,250	122,922,878
Cost of Sales				
Silicon Production Cost	-	840,000	11,640,000	30,000,000
Depreciation	23,696	222,168	468,834	832,892
Total Cost of Sales	23,696	1,062,168	12,108,834	30,832,892
Gross Profit	(23,696)	8,178,432	48,318,426	92,089,986
% Gross Profit	-	88.5%	80.0%	74.9%
Sales Expense	280,381	3,010,326	7,058,195	12,376,506
Contribution Margin	(304,078)	5,168,106	41,260,221	79,713,480
% Contribution Margin	-	55.9%	68.3%	64.8%
G&A	742,364	2,684,356	5,600,331	7,167,296
R&D	2,297,417	8,029,884	11,937,977	17,175,524
Income from Operations	(3,343,859)	(5,546,136)	23,721,913	55,370,660
Interest Expense	(3,333)	-	-	-
Interest Income	79,029	295,051	223,483	902,382
Pretax Income	(3,268,163)	(5,251,085)	23,945,396	56,273,042
Book Income Tax Provision	1,307,265	2,100,434	(9,578,159)	(22,509,217)
Net Income	(1,960,898)	(3,150,651)	14,367,238	33,763,825
% Net Income	-	(34.1%)	23.8%	27.5%
EBITDA	(3,314,238)	(5,268,426)	24,307,955	56,411,775

CASH FLOW STATEMENT

Net Income	(1,960,898)	(3,150,651)	14,367,238	33,763,825
Depreciation	29,621	277,710	586,042	1,041,115
Capital Spending	(492,000)	(1,349,000)	(1,621,000)	(2,575,000)
Deferred Taxes	(1,307,265)	(2,100,434)	3,640,185	-

Business Plan Financial Summary Template

Business Plan Financial Summary					
	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>
REVENUE					
Product x					
Market Size					
Market Share %					
# Units					
ASP					
Revenue					
Licensing					
Services					
TOTAL REVENUE					
EXPENSES					
Product x					
Components cost					
Labor Cost					
Total Cost					
Other Cost					
TOTAL COGS					
GROSS PROFIT					
Operating Expenses					
R&D					
SG&A					
OPERATING INCOME or LOSS					
EBIT					
Interest Expense					
Interest Expense					
Income Before Taxes					
Income Tax					
NET INCOME					

HW 6 – Financials

...Due Thursday, May 14th

- Create a Financial Summary for your Project
- Extra Credit:
 - Find a public company with annual revenues between \$50-100MM, study their Income Statement
 - Compare the Income statement for this company with a large company such as Intel or Facebook

Business Plan example Table of Contents

➤ Executive Summary

- Objectives
- Mission
- Key to Success

➤ Company Summary

- Startup Summary
- Management Team
- Technical Team
- Company Locations and Facilities

➤ Market Analysis

- Industry Overview
- Market Size
- Market Opportunities
- Competition

➤ Product Summary

- Product Description
- Sourcing and Technologies
- Product Development Schedules
- Competitive Analysis
- Product Advantages
- Product Roadmaps

➤ Marketing and Sales Strategy

- Targeted Markets
- Customers
- Strategic Alliances
- Advertising and Promotion
- Selling Tactics

➤ Manufacturing and Operations Plan

- Wafer Sourcing
- Backend Manufacturing Plan

➤ Organization and Personnel Plan

- Organization
- Personnel Plan

➤ Financial Plan

Term Sheet Outline – Summary of principal Terms

- Issuer:
- Closing Date:
- Form: Series C Preferred Stock.
- Price:
- Automatic Conversion: The Series C Preferred will be automatically converted into Common Shares upon
- Board of Directors:
- Voting and Protective Provisions:
- Restrictions on Stock Transfers:
- Rights of First Refusal:
- Pre-emptive Rights:
- Liquidation Preference:
- Antidilution Provisions
- Dividends:
- Redemption:
- CoSale Rights
- Registration Rights
- Standoff provision
- Information Rights:
- Expenses: