

AlphaTheory case study



Revolutionizing fundamental investing using probability weighted returns via collaborative, real-time, web-based applications built on the SmartClient Platform.

"We built a very detailed checklist of features we anticipated needing and gave every vendor an opportunity to complete that checklist. SmartClient was far and away the most complete match."

Dave Huffman, CTO, Alpha Theory

Technology to Revolutionize Investing

Back when Alpha Theory founder and CEO Cameron Hight worked on Wall Street, he knew that his team suffered from lack of process when making investment decisions. With multiple data points changing from minute to minute, decision-making was driven by gut instinct rather than risk / reward calculations. To remedy this, Cameron created a spreadsheet to structure the process of fundamental investing by assigning probability-weighted values to each asset. The spreadsheet succeeded in eliminating many of their investing mistakes and was the seed idea from which Alpha Theory grew.

Alpha Theory was founded in 2006. The goal was simple - to build a web-based version of the investment spreadsheet. It would show investment managers their firm's entire portfolio, use Alpha Theory's calculations to optimally balance it, and make updates in real time as prices change. As CTO, Dave Huffman, had the task of selecting the cutting edge technology necessary to build the Alpha Theory product. Dave researched all appropriate vendors and found that Isomorphic Software's SmartClient platform "was far and away the most complete match" to their requirements. A key factor was the powerful ListGrid component. It has "an impressive list of features built into the product natively which eliminated the need for custom development". These features included hiliting, formulas, frozen columns, export, filtering, grouping and much more.

The Assets Grid is core to the Alpha Theory solution. It has over 700 columns (still growing) that give investment managers information ranging from stock price and current position to the last date research for each stock was updated. Formula columns display calculated values such as how far each asset deviates from the optimum position. All of the data is updated in real-time, and hiliting capabilities focus user's attention when stock prices fluctuate, research for a position is outdated, or if the user is no longer pursuing the optimal investment strategy based upon Alpha Theory's calculations. The Alpha Theory solution has been proven time and again to make investors more successful. Many of the largest and well known fundamental hedge funds maximize returns by utilizing it on a daily basis.

Challenge

- Build a web based application to present customer's entire portfolio with probability weighted return
- Update data and rebalance optimal portfolio calculations in real time as stock prices change
- Allow Portfolio Managers to slice & dice data
- Revolutionize fundamental investing

Solution

- Isomorphic's SmartClient platform as the base technology
- SmartClient ListGrid as the centrepiece, providing enhanced spread sheet capability in a web browser
- SmartClient Charts for data visualizations

Why SmartClient?

- Powerful ListGrid with formulas, hiliting and more
- Depth of APIs and the ability to influence the SmartClient roadmap
- Isomorphic's ability to develop the initial prototype
- Impressive list of features and functionality built into product no need for custom development

Results

- Revolutionary real-time, collaborative web-based financial spreadsheet solution for investors
- Flexibility for end users to customize fields and formulas, slice & dice data, and make optimal investing decisions
- Clear market dominance

Return	(Absolute)	(Delta-Adj)	% from Optimal (Absolute)	(Adjusted)	Liquidity(3M)	Scenarios Updated Date		
265.3 %	255.3 % 10.0 %	4.1%	5.0 N	1.52	30.0 USD	9/12/14		
13,1 %	3.0 %	7.0 %	(4.0 %)	1.05	147.7 USD	9/5/14		
25%	0.0 %	27%	(3.7 %)	0.85	300.6 USD	0/25/14		
NA	0.0%	3.7 %	(\$7%)	0.96	68.0 USD			
155%	3.3 %	7.0%	(37%)	1.62	1,244.5 USD	9/15/14		
27.5 %	1.6%	5.2 %	(3.5%)	0.93	1.5 USD	7/18/14		
£ (2.9 %)	0.0 %	15.1 %	(2.5%)	1.00	NA	6/23/14		
52.4 %	8.9 %	5.8 %	3.2 %	1.29	184.4 USD	9/3/14		
28.1 %	5.2.%	23%	3.0 %	1.55	*16.4 USD	9/3/14		

FundAsset Grid: 700+ columns, hiliting, formulas & more

Data Just the Way You Like It

Alpha Theory users have a wide assortment of information to choose from. Depending on their needs at any given moment, some data may be more important. Alpha Theory provides standard views of the data with subsets of columns ordered and filtered in ways that match the user's particular needs. However, control is still in the hands of the end user to slice & dice data in order to create a customized format that makes most sense to them. Each user can select and rearrange columns, re-order the data, freeze columns (just like in a spreadsheet), filter the data, and - if appropriate - save or share their customized view.

Users are not just limited to the columns and data provided out of the box. Since every customer wants something just a little different, they can add their own custom fields, custom formulas, and rules for highlighting data under specific circumstances. Investment managers can collaborate from anywhere since the zero-install web-based interface is available on any browser, with no plugins required. And thanks to SmartClient, it just works on any device and operating system.

Sometimes, large volumes of data can hinder us from seeing the forest from the trees. That's why Alpha Theory added powerful visualizations by incorporating Isomorphic's HTML5 charts into the solution. Users can quickly pinpoint outliers or identify the optimal investment strategy. Huffman, the Alpha Theory CTO, investigated many competing charting solutions, but ultimately found SmartClient's "native integration impossible to ignore".

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Total: -64.3 bp		4.9 kpe	PSTG	29.81	16.0%	43.9%	3.5%	8.7%	(6.4%)	\$2.00	41,40	23.80	48.0%	129.1	23823	1.8%	41.0%	80% 3. High Set Cash		1. Very Crowded		
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HETORICAL Fall METRIC			0,8	55.74	5.7%	24.8%	6.0%	2.3%	(8.3%)	58.13	\$2.40	40.40	9425	63.2	15.27	7.8%	43.2%	70% 1. High Levelage		3 Mil Granded		
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	175 £185	Citeria 57.4%	NED	15.23	35.8%	61.9%	31%	6.0%	2.9%	36.00	25.90	14,40	38.8N	412.0	9423	45.7%	(29.9%)			1. Very Crowded	1. Highly Sensitive	
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	145 625	12.15	c	58.85	17.2%	32.7%	6.5%	2.5%	3.8%	144.00	100.90	25.00	56.1N	5.005	1113/23	2.5%	(5.2%)	BPS 2. Moderate Lev.		3. Net Growded		
	185 125	11.05	AMEN	92.76	22.0%	43.2%	23%	63%	3.8%	162.77	141.25	95.85	12.1%	5.053.8	9423	5.9%	(0.5%)	60% F. High Leverage		3. Net Growded		
Arg Alphe Theory Fund -			AMS SM	60.56	11,456	32.2%	60%	2.8%	(2.8%)	76.00	55.00	45.90	92.0N	45.0	1523	15.2%	415			3. Net Growded	1. Highly Sensitive	
HILTORICAL PORTCAST P			586	129.87	17.8%	32.5%	3.5%	6.3%	(2.8%)	195.00	125.96	95.37	\$3.5N	120.1	2194-025	(3.9%)	(90.7%)	80% 3. High Set Cash			2. Moderately Se .	
		-	CCJ	27.84	12.1%	54.75	2.5%	5.2%	(27N)	45.00	30.50	17.20	62.7N	125.7	203/03	2.8%	25.2%	70% 2. Moderate Lan.				
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	105 41.05		: MSFT	347.25	1825	35.2%	2.0%	C.AN	2.4%	285.01	387.56	101.74	33.5N	7,754.2	1403	0.1%	(23.5N)	70% 2. Moderate Lan			5. Lou Semilinity	
	13N -22.15	-27.5%	PER	10.75	24,25	\$3.8%	38%	1.0%	23%	15.00	17.25	0.64	25.2%	200.7	1403	13.8%	47%	70% 2. Moderate Law		3 Nat Growded	3. Low Sensitivity	
	1.67 2.9		PEP	170.86	36.1%	19.2%	EAN	£3N	(1.7%)	255.09	243.82	122.64	\$2.1N	\$12.9	1110/03	(3.9%)	2485	180% 3. High Net Cash		3. Nat Growded	3. Lou Sensitivity	
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			RORD	66.42	burket	24.2%	6.0%	1.2%	(1.2%)	55.58	42.46	29.64	25.0%	506.0	1693	62.7%	(80.0%)	SPS 2. High Set Cash		1 May Crowded		
PROBABLEY WEIGHTED			NFM	41.54	42%	38.2%	6.0%	1.3%	(1.2%)	96.21	43.06	38.40	56.0N	96.3	5493	10/2/11	(27%)	60% T. High Leverage		3 Mid Growded		
Carson		Optimal	MAR	170.45	lowel.	38.2%	6.0%	1115	(6.5%)	223.29	163.58	112.90	65.0%	317.6	54.03	13.7%	25.Th	RPS 3 High Sel Cash		1. Very Crowded	2. Moderately Be .	
Long 1275		16.5%	COL SM	6.45	3.8%	31.7%	E.ON	115	(6120)	8.94	6.05	4.94	45.8%	7.5	15.22	2.4%	(26.9%)	78% 3. High Set Cesh			2. Moderately Se .	
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Total 17.0%		21.8%	44.2	29.74	15.65	47.8%	21%	3.5%	(8.5%)	44.00	16.00		51.4%	11.1	2622	084	(4.0%)	SETS 3. High Set Cash			1 2 Moderately Se.	
@100% 11.5%		27.9%	NCC	35.40	5.7%	45.7%	60%	6.3%	0.5%	51.50	22.54	27.55	25.0%	190.7	2/16/23	1946	(10.5%)			3. Net Granded	3. Low Sensitivity	
Value: 500 SM		\$1548	PEGA	45.15	15-251	62.75	60%	6.3%	(6.2%)	82.00	25.94	30.00	21.6%	15.0	95/27	34.7%	19.25	85% 3. High Sel Cash	R.Low	3. Net Growded	1. Highly Sensitive	2.199/66
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Rink JT 21		425	10	45.48	44.75	72.7%	60%	(7.8%)	7.8%	34.28	20.00	112.18	35.3%	351.9	238.93	2.2%	23%			1 May Crowded	1. Highly Senadow 3. Loui Senadow	
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Resard 84.19		62.9%	XXM	10.01	(867%)	34.9%	01110	(8.2%)	125	107.10	67.03	37.36	88.1%	1,882.7	56.03	3.9%	7.7%	40% 3. High Set Cash		3 Mil Granded		
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		^		25.36	Rear	33.7%	0.110	05.150	3.9%	24.58	19.25	15.90	54.6%	*229.3	95.23	7.8%	17.8%	78% 2 Moderate Lev.		3. Net Growded	1. Highly Sensitive	
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Adda a	ela Actua		100	25.75	(35.75)	73.8%	(Arts)	(8.6%)	(2.6%)	1.50	6.23	5.34	90.2%	45.1	9403	545	(36.1%)	66% 2. Moderate Law.		3. Net Growded	1. Highly Sonalive	
Long 77.5% 80		88.7%	NOVOB DC	4	01.90	77.84	1279.3	0.000	2.8%	A377 A3	447.58	1000	97.15	204.7	04.01	100	177.25	COL 1 Hab Ed Cash	1 Gross	1 Shee Consider	1 Hobb Cerailine	1 Gross
Shot -72.0% -21	9% -72.8%	-57.6%	Long		12.7%	43.8%	45.3%	72.8%	(28.1%)				85.9%	254.1		3.75	91.75	885				
			Short		485	43.7%	(38.8%)	(72.0%)	41.8%				61.2%	1,245.5		4.7%	25.4%	54%				
Delvis Fund		COI Find	244		17.3%	43.75	19.5%	6.5%	13.3%				\$1.0%	718.4		7.2%	17.475	125				

Easily among the most sophisticated AJAX applications in existence



Slicing, dicing and visualizing to optimize portfolios

Trailblazing as a Team Sport

To say that Alpha Theory is ahead of the competition would be inaccurate. Except for a few homegrown solutions, there is no competition. With the installed base increasing rapidly, Alpha Theory is undoubtedly in a fantastic position. However, getting a unique, highly technical solution such as Alpha Theory to market requires resolution of many unique technical issues. Alpha Theory found a solid partner in Isomorphic Software from the start and, as a result, both partners are infinitely stronger today.

Isomorphic Consulting built the initial Alpha Theory prototype via the Jump Start program, which combines customized training with hands-on development expertise. Jump Start helped to ensure that Alpha Theory followed best practices, avoided potholes, and put its best foot forward. It also highlighted areas of SmartClient that required performance tuning, additional features, or enhancement due to Alpha Theory's comprehensive use of SmartClient's deep feature set. And, Alpha Theory has found Isomorphic's Support Services to be "beyond phenomenal".

After eight years, Alpha Theory is still driving the SmartClient roadmap. Through Isomorphic's Feature Sponsorship program, Alpha Theory has contributed to several features in recent releases, such as Charting Enhancements in SmartClient 9.0, and ListGrid enhancements in SmartClient 10.0. This has proven to be a very low risk and cost effective approach as opposed to the risky prospect of internal custom development or integration of third-party solutions.

Alpha Theory Grids

The SmartClient ListGrid is central to the Alpha Theory solution:

- 700+ columns in a single grid
- Predefined grid views
- Formula columns
- Real-time data updates
- Hiliting of up, down & stale data
- Frozen columns
- Grouping
- Ordering
- Filtering
- End-user defined fields
- End-user defined formulas
- End-user defined grid views
- End-user defined hiliting
- Totals
- Charting
- Exports to PDF and Excel



Learn More at www.SmartClient.com



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