# J.P.Morgan

# TeleNav, Inc.

### Leading the Way: Initiating at Overweight

We are initiating coverage of TeleNav, Inc. (TNAV) with an Overweight rating and a \$13.50 price target. We think TNAV is attractively valued; competitive threats weigh on sentiment, which we think will be dispelled by solid execution, and product and contract announcements. As the leading carrier-branded, turn-by-turn navigation solution for use on GPS-enabled smartphones, TNAV is poised for 24% compound annual revenue growth and 35%-plus EBITDA margins through FY13, while investing aggressively in international growth, and location-based services that could reach five billion consumers. We forecast CY10 PF EPS of \$1.03 and CY11 PF EPS of \$0.94.

- The addressable market for turn-by-turn (TBT) navigation and mobile search is vast. By the end of 2010, there will be five billion mobile phone subscribers, with over 360 million GPS-enabled handsets, and 266 million smartphones will ship, mostly pre-loaded with mobile navigation applications. Wireless carriers are promoting and pricing TBT service to grow data ARPUs and build customer loyalty. We believe TBT will spawn mobile search and location-based advertising, a market that could reach \$18 billion in value by 2015.
- TeleNav is the leading provider of carrier-branded TBT navigation in North America, with more than 15 million subscribers, primarily on the Sprint and AT&T networks. The company has strong momentum as the OEM solution for Ford, and is starting up operations with China Mobile, the world's largest operator. In our view TeleNav could be a major navigation and search engine for the mobile internet, competing with industry giants like Google and Microsoft.
- Multiple growth opportunities and a compelling business model. We forecast a three-year revenue CAGR of 24%, driven by a subscriber CAGR of 32%, and new markets, offset by declining ARPUs as TBT navigation is increasingly bundled. Gross and operating margins should decline, owing to bundling and aggressive R&D investment, but we believe EBITDA margins will trough at 34%, yielding leverage with growth in FY13 and beyond.
- We are initiating coverage of TNAV with an Overweight rating, reflecting our view that the stock is attractively valued and will outperform the mean of our coverage in the next 6-12 months. Our December 2010 price target is \$13.50. There are three key risks: 1) customer concentration, 2) competing "free" solutions, and 3) declining medium-term margins owing to bundling.

TeleNav, Inc. (TNAV;TNAV US)

	2009A	2010E	2011E	2012E
EPS - Recurring (\$)				
Q1 (Sep)	0.18	0.22A	0.21	0.24
Q2 (Dec)	0.24	0.28A	0.20	0.26
Q3 (Mar)	0.26	0.34A	0.21	0.27
Q4 (Jun)	0.36	0.28	0.23	0.28
FY	1.04	1.12	0.86	1.04
CY	1.12	1.03	0.94	1.13

Source: Company data, Bloomberg, J.P. Morgan estimates.

GAAP EPS estimates: FY09A=\$1.02; CY09A=\$1.10

FY10: 1QA=\$0.22, 2QA=\$0.27, 3QA=\$0.33, 4QE=\$0.24; FY10E=\$1.05; CY10E=\$0.95 FY11: 1QE=\$0.20, 2QE=\$0.18, 3QE=\$0.20, 4QE\$0.21=; FY11E=\$0.79; CY11E=\$0.86

FY12: 1QE=\$0.22, 2QE=\$0.24, 3QE=\$0.25, 4QE=\$0.26; FY12E=\$0.96; CY12E=\$1.04

# Initiation Overweight

TNAV, TNAV US Price: \$8.45

Price Target: \$13.50

## Applied & Emerging Technologies

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#### Price Performance



	YTD	1m	3m	12m
Abs	-8.7%	0.0%	-8.7%	-8.7%



Company Data	
Price (\$)	8.45
Date Of Price	21 Jun 10
52-week Range (\$)	11.48 - 7.80
Mkt Cap (\$ mn)	321.33
Fiscal Year End	Jun
Shares O/S (mn)	38
Price Target (\$)	13.50
Price Target End Date	31 Dec 10

See page 37 for analyst certification and important disclosures.

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## **Key Investment Points**

## TeleNav, Inc. (TNAV) **Overweight**

For more on TNAV's addressable market see Industry

Overview starting on page 16.

See page 20 for Gartner's LBS forecast, and page 20 for the

JPM LBA market forecast.

TeleNav is a software-based provider of carrier-branded, turn-by-turn (TBT) navigation and mobile search solutions, and as such, is poised to exploit a major global growth opportunity arising from the convergence of GPS-enabled mobile phones, smartphone operating systems, mobile internet access, and 3G wireless networks.

#### The addressable market for TBT navigation and mobile search is vast

By the end of 2010 there will be five billion mobile phone subscribers worldwide, with over 324 million in North America and over 500 million in Western Europe, two of the more developed wireless data markets. Wireless data revenues continue to grow rapidly (~11% y/y in N. America) as subscribers increase their use of SMS texting, email, internet access, navigation, and search, enabled by the availability of inexpensive smartphones. In 2010, we expect over 360 million GPS-enabled handsets (IDC) and 266 million smartphones (JPM estimate) to ship globally, mostly pre-loaded with mobile navigation applications, or mobile storefronts from which TBT applications can be downloaded. With the enablers in place, and growing consumer awareness of TBT, subscriber growth is very strong, comScore estimates TBT subscriber growth of 68% in Europe in 2009. TeleNav witnessed 91% y/y subscriber growth in the quarter ended March 31, 2010.

#### Location-based services (LBS) – an \$8 billion market by 2012

TBT navigation is a subset of location-based services, which should be a major growth market in the even broader context of the mobile internet. Gartner forecasts LBS subscriber growth to be 46% through 2011, yielding nearly 300 million subscribers by the end of 2012, and a revenue opportunity of just over \$8 billion in the same timeframe, a CAGR of 44%. J.P. Morgan analyst Rod Hall estimates that the mobile Location-Based Advertising (LBA) market could top \$18 billion by 2015. PricewaterhouseCoopers estimates that mobile advertising will quadruple from \$414 million in 2009 to \$1.6 billion in 2014. We believe TeleNav's application portfolio will expand to exploit the broader LBS opportunity.

#### Wireless operators have a strong incentive to promote TBT navigation

Major wireless operators in N. America and Europe are pre-loading own-brand TBT applications on smartphones and feature phones that they are introducing into the market. The application is infrequently used and light on bandwidth, placing limited stress on the network, but generates material incremental per subscriber data ARPU when sold à la carte (\$9.99/month at AT&T). Demand seems to be price elastic, so when Sprint bundled TBT with a monthly data plan subscriber volumes grew dramatically (now over 10 million, implying ~25% penetration of post-paid subs). This could be strategically significant for the wireless operator, because the application has personalization options that could make it "sticky," a source of customer loyalty, and the entry point to a broader swathe of carrier-oriented applications associated with mobile internet, including mobile advertising and mobile search. Essentially, TBT can defend the carrier from the threat of becoming a dumb pipe.

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About 10% penetration for TeleNav TBT navigation at Sprint and AT&T.

# TeleNav is the leading provider of carrier-branded TBT navigation in North America

TeleNav has more than 15 million subscribers, primarily on the Sprint and AT&T networks, which represent a combined addressable market of about 130 million subs, so penetration stands at about 10% (assumes 1-2 million subs on T-Mobile and other networks). The company's TBT navigation application runs on more than 500 devices and on all major smartphone operating systems, both leadership positions. The company has strong momentum as the OEM solution for Ford, running on the Microsoft-powered SYNC platform, and is starting up operations with China Mobile, the world's largest operator. With over 800 engineers (more than half located in China) and 10 patents (30 applications pending), TeleNav is a focused presence in navigation and search, and is innovating quickly under the leadership of a strong management team. The product platform, centered on TBT navigation, also includes mobile resource management (MRM) solutions for businesses, auto OEM solutions, social networking applications (e.g., Whereaboutz, Onmyway, Sipity), and locationbased advertising. In our view, TeleNav is positioned to be a major participant in LBS, navigation, and search on the mobile internet, competing with industry giants that include Google, Yahoo, and Microsoft.

#### There are multiple growth opportunities for TeleNav

We forecast a three-year revenue CAGR of 24% (through FY13), driven primarily by a subscriber CAGR of 32% over the same period, offset in part by declining ARPUs as TBT navigation is increasingly bundled. Subscriber growth should come from deeper penetration of existing wireless accounts in the next two years, while we expect revenues from China Mobile to be material by FY12. From near zero revenue today, we look for Auto OEM solutions (initially Ford) to generate well over 5% of revenue by the end of FY12, MRM to generate nearly 5% of revenue, and ad-based revenues to represent 2-3% of overall revenue. There may also be a contiguous opportunity to license or embed the TeleNav platform in social networking websites.

We forecast \$1.03 PF EPS in CY10 and \$0.94 in CY11 (higher share count).

#### The business model is already compelling

F3Q10 gross margins of 84% and EBITDA margins of 47% should decline, owing to bundling and increased investment, but we believe this low-capex, cash-generating company should generate 70%-plus gross margins and EBITDA margins of over 34% even at the trough of the investment cycle. We believe free cash flow to equity will steadily expand from about \$34 million in FY11 to over \$80 million in FY15, a four-year CAGR of 26%, and EBITDA margins should climb to over 37% again as the company begins to harvest some of the investment being made in the next year or so. We believe TNAV can generate PF EPS of \$1.03 in CY10 and \$0.94 in CY11.

See page 11 for analysis that explores earnings sensitivity to subscriber and ARPU assumptions.

#### ARPU/Subscriber sensitivity analysis

A key consideration for investors is the relationship between carrier pricing and subscriber adoption. To date the market has demonstrated strong positive price elasticity. By way of example, Sprint introduced bundling of TeleNav TBT in March 2008 when the blended ARPU stood at \$3.85 and subscriber count was under one million. A year later, the blended ARPU stood at \$1.14 and the subscriber count had jumped to nearly 8 million. Looking forward, we believe declining ARPUs will fuel continued growth, but weigh on margins. On page 11, we include a sensitivity analysis, which gives investors the ability to evaluate the estimated impact of subscriber growth and ARPU decline on revenue, EBITDA and PF EPS. An interactive version of this model is available on request.

## **Investment Risks**

#### **Customer concentration risk**

Sprint accounted for 54% of FY09 revenues, and the contract with TeleNav ends in December 2011. In addition, we estimate Sprint accounts for nearly 12 million TNAV subscribers today and TeleNav is approaching 25% penetration of the post-paid market at that account, so aside from the contract rollover risk, there is also a risk that growth at Sprint slows soon. AT&T accounted for 27.5% of FY09 revenue and we expect revenue growth at AT&T to be higher than at Sprint, especially if the operator begins to introduce bundling. The AT&T contract expires in March 2011.

See page 27 for more on competition and how we think it can be contained.

#### Free navigation available from Google, Nokia, and Microsoft

Google introduced Google Maps Navigation for use on Android 2.0 devices in October 2009, and has since launched the free application in N. America and most of Europe. In January 2010, Nokia announced the availability of free navigation with Ovi Maps for use on S60 and Maemo smartphone platforms, which are widely used in Europe. In May 2010, Microsoft announced that free navigation would be available later in 2010 on devices running Windows Mobile 6.0 (and higher). Apple offers free maps and driving instructions, and a variety of TBT solutions are available for the iPhone and the iPad via the webstore. Free navigation is a serious threat to TeleNav, and these large companies are able to subsidize these initiatives indefinitely in a manner that TNAV cannot.

# TeleNav's business model could change dramatically, with the onset of ad-based navigation and search

"Free" navigation will be increasingly supported by ad-based revenues. J.P. Morgan analyst Rod Hall estimates the LBA market could exceed \$18 billion by 2015. PricewaterhouseCoopers forecasts a four-fold increase in global mobile advertising, from \$414 million in 2009 to \$1.6 billion in 2014. TeleNav recognizes that the "paid" navigation market (subscription based, or bundled) may not be sustainable long term, to the extent that consumers are accepting of the placement of adverts and coupons on their phones (some may want to pay a premium for TBT navigation without the clutter).

For how the business model could change with lower ARPUs, please refer to Sensitivity Analysis, on page 11.

# Bundling and free navigation weigh on the business model in excess of our expectations

We expect TNAV's ARPUs to decline about 8% y/y in FY11 to \$0.95, stabilize in FY12 (owing to a higher proportion of revenue from AT&T), and then decline slowly for the indefinite future, primarily owing to the wireless operators transitioning to bundling and ad-based navigation and search. We expect gross margins to decline from a peak of 84% in F3Q10 to under 70% by FY15, and for EBITDA margins to decline from about 47% today to about 35% in FY11. There could be downside to the ARPUs and margins owing to competition and more rapid adoption of bundling (e.g., by AT&T), though the latter could also buoy subscriber and revenue growth ahead of expectations.

#### Growth initiatives are somewhat opaque and risky

TNAV is engaged in some speculative software development (e.g., Whereaboutz, OnMyWay) in pursuit of new markets that might not develop (e.g., LBS features in social networking sites). We believe TNAV may make acquisitions in Europe to accelerate growth. The company is delivering solutions to a modest number of very large customers that have purchasing power and potentially the ability to stifle

contract announcements and news flow for competitive reasons, so the intra-quarter information flow for TNAV could be modest. There are no good pure-play comps for TNAV, and the resulting information vacuum could lead to considerable intra-quarter stock volatility.

### **Company Description**

TeleNav is a software-based provider of carrier-branded, location-based applications delivered to GPS-enabled mobile devices, principally smartphones. TNAV consumer applications include turn-by-turn navigation (voice and screen instructions), maps, local search, and social networking. Enterprise solutions (MRM) include tools for monitoring the location of vehicles and other assets and for optimizing a mobile workforce.

TeleNav has ~14.5 million subscribers with 15 wireless carrier partners in 29 countries and covers more than 500 phone models and all major mobile OSs. The company's product portfolio includes Mobile Navigation, In-Dash Navigation, Enterprise LBS, and Mobile Advertising/Commerce. TeleNav was founded in 1999 and is headquartered in Sunnyvale, California with a significant presence in China and additional offices in the U.S., Mexico, Brazil, and the U.K. As of March 31, 2009, the company had 878 employees of which 670 were in functions related to R&D, with 331 in the U.S and 541 in China.

TeleNav began trading on the Nasdaq on May 13, 2010, under the ticker symbol "TNAV."

## **Earnings Overview**

We forecast CY10 PF EPS of \$1.03, PF EBITDA of \$78.5mm, and revenue of \$191.5mm.

We forecast CY11 PF EPS of \$0.94, PF EBITDA of \$84.7mm, and revenue of \$234.1mm.

We forecast CY12 PF EPS of \$1.13, PF EBITDA of \$104.6mm, and revenue of \$289.5mm.

We look for TNAV to grow PF EBITDA at a CAGR of about 17% over the next five years on a revenue CAGR of 22%. The loss of leverage relates to lower ARPUs and gross margins originating from increased bundling of TBT navigation, and a nearer-term investment phase that positions the company for longer-term growth in the mobile internet.

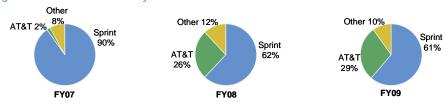
Demand for TeleNav TBT seems to be price elastic. We think this is an important consideration for investors. We note that in September 2007 ARPU was about \$5.15 and TNAV reported less than 500,000 subscribers. Growth accelerated in June 2008 when Sprint started to bundle TeleNav as part of the Simply Everything plan, and by December 2008, the total subscriber count approached six million. We believe bundling by AT&T could have a similar effect, however there is no guarantee that the price-elastic relationship will endure.

We expect TNAV to report 4QFY10 PF EPS of \$0.28, PF EBITDA of \$21.5 million, and revenue of \$46.9 million. We look for FY11 guidance to align with our expectations: FY11E PF EPS of \$0.86, PF EBITDA of \$74.7 million, and sales of \$210.1mm.

#### **Revenue Outlook**

Currently, nearly all of TNAV's revenues relate to consumer TBT subscribers at Sprint and AT&T (90% of FY09 revenue). 96% of FY09 revenue originated in the U.S. We believe MRM and Auto OEM revenues currently represent less than 3% of total revenue. The subscription revenues are recurring in nature and the company has good visibility into current quarter activity owing to real-time reporting of activations.

Figure 1: Revenue Breakdown by Customer



Source: Company reports

Contracts govern the carrier relationships. The Sprint contract extends through December 2011 and the AT&T contract through March 2011. We expect both contracts to be rolled over. Alltel is of declining significance to TeleNav (migrating to Verizon systems). The Bell Mobility contract extends to June 2011; Rogers and T-Mobile (U.S.) are three-month rolling contracts.

We expect TBT subscription revenue growth of approximately 49% in FY10, 25% in FY11, and 37% in FY12. Subscription revenue growth should be fueled by rapid adoption by subscribers, nearly 64% in FY10, 13.5% in FY11, and nearly 17% in FY12; however, this should be offset by declining ARPUs through mid-FY11 owing to increased bundling at Sprint. We expect a temporary rise in ARPUs in late FY11 owing to higher relative growth of "monthly recurring charge" (MRC) customers at AT&T, but for the ARPU decline to resume in FY12 as AT&T turns to bundling and other carriers in Asia (China Mobile) and Latin America (Vivo, Telcel) come on board.

Figure 2: Subscribers, ARPUs, and Total Subscription Revenue Forecast

\$ in millions, units in volumes

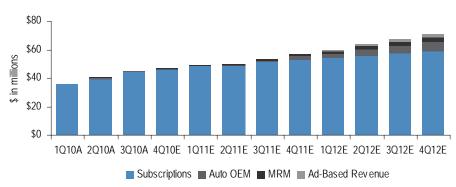


Source: Company reports and J.P. Morgan estimates.

We look for rapid growth in Auto/OEM revenues (Ford SYNC) and MRM through FY12, though from a low base. We believe Ford will be deploying TeleNav's TBT navigation on all new 2010/2011 Ford and Lincoln models, and that TeleNav has potential to introduce similar solutions into other auto OEMs in the next year or two. Regarding MRM, we believe TeleNav, in partnership with its telecom partners, will more aggressively market its enterprise solutions next year, and build a more focused direct sales team. Location-based advertising is likely to be a modest contributor to growth in the FY10-FY12 timeframe.

Figure 3: Revenue Forecast through FY12

\$ in millions



Source: Company reports and J.P. Morgan estimates.

Looking longer term, we believe China Mobile and location-based advertising will be material contributors to growth in FY13 and beyond.

Table 1: Fiscal Year Long-Term Revenue Forecast

	FY09A	FY10E	FY11E	FY12E	FY13E	FY14E	FY15E
Paying Subscribers (000s)	10,000	16,350	18,550	21,650	25,700	32,950	40,950
Net Adds (000s)	2,000	7,814	2,200	3,100	4,050	7,250	8,000
Average Subscribers (000s)		13,907	17,450	20,100	23,675	29,325	36,950
ARPU (\$)		\$1.04	\$0.95	\$0.94	\$0.88	\$0.81	\$0.75
% Growth (q/q)							
% Growth (y/y)			-7.8%	-1.6%	-6.3%	-7.8%	-7.8%
Subscription Revenue	0.0	165.9	200.5	226.3	248.3	283.1	331.6
% change y/y			20.8%	12.9%	9.7%	14.0%	17.1%
Ad-Based Subscribers (000s)		150	2,050	6,550	12,550	19,150	26,150
Net Adds (000s)		150	1,900	4,500	6,000	6,600	7,000
Average Subscribers (000s)		75	1,100	4,300	9,550	15,850	22,650
Ad-Based Revenue (50% share)	0.0	0.0	1.3	6.6	21.1	40.9	57.1
% change y/y			2900.0%	423.2%	218.6%	93.8%	39.6%
Automotive		1.1	4.8	18.5	31.9	37.7	42.3
% change y/y			336.4%	285.4%	72.4%	18.3%	12.0%
MRM		1.6	3.6	10.1	16.7	20.0	22.4
% change y/y			130.1%	180.6%	64.9%	20.3%	12.0%
Total Revenue	110.9	168.6	210.1	261.5	317.9	381.8	453.4
% Growth (y/y)	130.7%	52.1%	24.6%	24.4%	21.6%	20.1%	18.8%

Source: Company reports and J.P. Morgan estimates.

Table 2: Calendar Year Long-Term Revenue Forecast

\$ in millions

	CY09A	CY10E	CY11E	CY12E	CY13E	CY14E
Paying Subscribers (000s)	14,000	17,550	20,050	23,450	28,950	36,950
Net Adds (000s)	14,000	3,550	2,500	3,400	5,500	8,000
Average Subscribers (000s)		15,775	18,800	21,750	26,200	32,950
ARPU (\$)	\$1.07	\$0.97	\$0.95	\$0.91	\$0.85	\$0.78
% Growth (g/g)						
% Growth (y/y)		-9.4%	-2.0%	-4.2%	-7.5%	-7.8%
Subscription Revenue	75.3	187.3	213.7	237.8	262.3	307.8
% change y/y		148.8%	14.1%	11.3%	10.3%	17.4%
Ad-Based Subscribers (000s)	-	850	3,950	9,550	15,850	22,650
Net Adds (000s)		850	3,100	5,600	6,300	6,800
Average Subscribers (000s)		425	2,400	6,750	12,700	19,250
Ad-Based Revenue (50% share)	0.0	0.4	3.4	12.2	31.4	48.9
% change y/y		-	824.7%	263.1%	158.1%	55.5%
Automotive	0.7	1.5	11.2	25.4	35.1	39.9
% change y/y		114.3%	646.7%	126.8%	38.3%	13.5%
MRM	0.6	2.4	5.8	14.1	18.5	21.2
% change y/y		294.1%	145.3%	143.1%	31.4%	14.2%
Total Revenue	140.7	191.5	234.1	289.5	347.4	417.8
% Growth (y/y)		36.1%	22.3%	23.7%	20.0%	20.3%

### **Earnings Outlook**

Gross, operating, and EBITDA margins will likely plunge in FY11-FY12 before recovering in FY13. This should originate in declining ARPUs, which will weigh on gross margins. 70% of subscriber COGS is largely represented by licensing fees and they increase with usage (which is increasing). About 30% of costs are fixed and relate to data center and customer support operations, so there could be some longer-term leverage here. We do not expect gross margins to return to the peak 84% level seen in FY10.

Operating and EBITDA margins should also decline largely as a result of the pressure on gross margins. In addition, the company is investing heavily in new products and services (R&D is expected increase over 70% in FY10 and over 40% in FY11) and to support carriers in new geographies (more than 50% of the engineers are located in China), and there is a significant increase in G&A (public company costs) in FY10.

Figure 4: Margin Forecast through FY12

Source: Company reports and J.P. Morgan estimates.

Longer term, we believe EBITDA margins will trough at about 35%, and then expand to about 37% through FY15 as the company scales growth with its newer carrier partners and new products & services.

PF net income is forecast to decline in FY11 to \$39.7 million from \$43.6 million in FY10, primarily due to a 10% decrease in EBITDA margins, but also due to a higher tax rate (about 200bp). We estimate PF EPS of \$0.86 will represent a decline of about 23% in FY11 owing to lower margins, a higher tax rate, and a significant 20% increase in the weighted average share count.

We expect PF net income to grow about 24% in FY12 as the company scales. We look for FY12 PF EPS of \$1.04, marking a 21% y/y increase.

Note that TeleNav carries negligible inventory, and that capital expenditure (primarily relating to data center operations and office equipment) is modest at about \$10 million per year. The company does capitalize major software projects but the amount capitalized to date is negligible. Non-cash stock compensation, currently running at about \$5 million per annum, normalized, is a consideration when calculating pro forma earnings.

**Table 3: Income Statement Snapshot** 

\$ in millions, except per share data

	FY09A	1Q10A	2Q10A	3Q10A	4Q10E	FY10E	1Q11E	2Q11E	3Q11E	4Q11E	FY11E	FY12E
Revenue												
Subscription	0.0	35.7	39.5	44.4	46.2	165.9	48.2	48.4	50.9	52.9	200.5	226.3
Ad-Based	0.0			0.0	0.0	0.0	0.1	0.2	0.4	0.6	1.3	6.6
Automotive		0.1	0.6	0.2	0.2	1.1	0.5	0.6	1.2	2.5	4.8	18.5
MRM		0.2	0.4	0.5	0.5	1.6	0.6	0.8	1.0	1.2	3.6	10.1
Total Revenue	110.9	36.0	40.5	45.1	46.9	168.6	49.4	50.0	53.5	57.2	210.1	261.5
% Growth (y/y)	130.7%	67.5%	60.4%	51.1%	37.1%	52.1%	37.1%	23.5%	18.7%	21.8%	24.6%	24.4%
Gross profit	90.6	29.0	33.6	37.9	38.0	138.6	39.5	39.0	41.2	43.7	163.4	194.4
Gross Margin	81.7%	80.4%	83.0%	84.1%	81.0%	82.2%	80.0%	78.0%	77.0%	76.4%	77.8%	74.3%
R&D	23.5	7.9	9.4	10.9	12.0	40.2	13.4	13.8	14.4	15.0	56.6	66.1
S&M	16.5	3.9	4.1	4.5	5.3	17.8	6.0	6.3	6.4	6.8	25.5	30.0
G&A	8.3	2.6	3.1	3.5	4.0	13.2	4.2	4.4	4.6	5.0	18.3	21.9
Oper. income	42.3	14.6	17.0	19.0	16.7	67.3	15.8	14.5	15.8	17.0	63.1	76.4
Operating Margin	38.1%	40.5%	42.0%	42.2%	35.5%	39.9%	32.1%	29.0%	29.5%	29.7%	30.0%	29.2%
PF EBITDA	45.2	15.9	18.8	21.2	21.5	77.4	18.4	17.4	18.7	20.3	74.7	96.2
EBITDA Margin	40.7%	44.2%	46.4%	46.9%	45.8%	45.9%	37.2%	34.8%	34.9%	35.5%	35.6%	36.8%
PF PTI	42.0	14.4	17.8	19.9	20.1	72.2	17.0	15.8	17.2	18.5	68.4	83.1
PF Net Income	30.0	8.3	10.5	13.1	11.7	43.6	9.8	9.2	10.0	10.7	39.7	49.1
Net Margin	27.0%	23.0%	25.9%	29.0%	24.9%	25.8%	19.9%	18.3%	18.6%	18.7%	18.9%	18.8%
GAAP EPS -	\$1.02	\$0.22	\$0.27	\$0.33	\$0.24	\$1.05	\$0.20	\$0.18	\$0.20	\$0.21	\$0.79	\$0.96
PF EPS	\$1.04	\$0.22	\$0.28	\$0.34	\$0.28	\$1.12	\$0.21	\$0.20	\$0.21	\$0.23	\$0.86	\$1.04
Diluted shares	28.833	37.521	38.001	38.028	42.300	38.962	46.000	46.200	46.400	46.600	46.300	47.185

Source: Company reports and J.P. Morgan estimates.

### **Sensitivity Analysis**

Revenue and earnings are sensitive to subscriber growth and ARPU declines. The following tables provide investors with a snapshot of the potential impact of subscriber and ARPU assumptions on estimated revenues, EBITDA, and PF EPS. An interactive version of this model is available on request.

Table 4: CY11E Revenue Sensitivity Relative to ARPUs and Average Subscribers \$ in millions

_				ARPU			
	\$0.30	\$0.50	\$0.70	\$0.90	\$1.10	\$1.30	\$1.50
11,000	60	86	113	139	166	192	218
12,000	64	92	121	150	179	208	236
13,000	67	98	130	161	192	223	254
14,000	71	104	138	172	205	239	272
15,000	74	110	146	182	218	254	290
16,000	78	116	155	193	232	270	308
							326
18,000	85	128	172	215	258	301	344
							362
							380
							398
							416
- 1							434
							452
							470
							488
							506
							524
							542
30,000	128	200	272	344	416	488	560
	12,000 13,000 14,000 15,000 16,000 17,000	11,000 60 12,000 64 13,000 67 14,000 71 15,000 74 16,000 78 17,000 82 18,000 85 19,000 89 20,000 92 21,000 96 22,000 100 23,000 103 24,000 107 25,000 110 26,000 114 27,000 118 28,000 121 29,000 125	11,000     60     86       12,000     64     92       13,000     67     98       14,000     71     104       15,000     74     110       16,000     78     116       17,000     82     122       18,000     85     128       19,000     89     134       20,000     92     140       21,000     96     146       22,000     100     152       23,000     103     158       24,000     107     164       25,000     110     170       26,000     114     176       27,000     118     182       28,000     121     188       29,000     125     194	11,000       60       86       113         12,000       64       92       121         13,000       67       98       130         14,000       71       104       138         15,000       74       110       146         16,000       78       116       155         17,000       82       122       163         18,000       85       128       172         19,000       89       134       180         20,000       92       140       188         21,000       96       146       197         22,000       100       152       205         23,000       103       158       214         24,000       107       164       222         25,000       110       170       230         26,000       114       176       239         27,000       118       182       247         28,000       121       188       256         29,000       125       194       264	\$0.30 \$0.50 \$0.70 \$0.90  11,000 60 86 113 139  12,000 64 92 121 150  13,000 67 98 130 161  14,000 71 104 138 172  15,000 74 110 146 182  16,000 78 116 155 193  17,000 82 122 163 204  18,000 85 128 172 215  19,000 89 134 180 226  20,000 92 140 188 236  21,000 96 146 197 247  22,000 100 152 205 258  23,000 103 158 214 269  24,000 107 164 222 280  25,000 110 170 230 290  26,000 114 176 239 301  27,000 118 182 247 312  28,000 121 188 256 323  29,000 125 194 264 334	\$0.30 \$0.50 \$0.70 \$0.90 \$1.10  11,000 60 86 113 139 166  12,000 64 92 121 150 179  13,000 67 98 130 161 192  14,000 71 104 138 172 205  15,000 74 110 146 182 218  16,000 78 116 155 193 232  17,000 82 122 163 204 245  18,000 85 128 172 215 258  19,000 89 134 180 226 271  20,000 92 140 188 236 284  21,000 96 146 197 247 298  22,000 100 152 205 258 311  23,000 103 158 214 269 324  24,000 107 164 222 280 337  25,000 110 170 230 290 350  26,000 114 176 239 301 364  27,000 121 188 256 323 390  29,000 125 194 264 334 403	\$0.30 \$0.50 \$0.70 \$0.90 \$1.10 \$1.30 \$1.30 \$11,000 60 86 113 139 166 192 12,000 64 92 121 150 179 208 13,000 67 98 130 161 192 223 14,000 71 104 138 172 205 239 15,000 74 110 146 182 218 254 16,000 78 116 155 193 232 270 17,000 82 122 163 204 245 286 18,000 85 128 172 215 258 301 19,000 89 134 180 226 271 317 20,000 92 140 188 236 284 332 21,000 96 146 197 247 298 348 22,000 100 152 205 258 311 364 22,000 107 164 222 280 337 395 24,000 107 164 222 280 337 395 25,000 110 170 230 290 350 410 26,000 121 188 182 247 312 377 442 28,000 121 188 256 323 390 457 29,000 125 194 264 334 403 473

Source: J.P. Morgan estimates.

Table 5: CY11E EBITDA Sensitivity Relative to ARPUs and Average Subscribers

\$ in millions

					ARPU			
		\$0.30	\$0.50	\$0.70	\$0.90	\$1.10	\$1.30	\$1.50
	11,000	(29)	(12)	6	23	40	58	75
	12,000	(27)	(8)	11	30	49	68	87
	13,000	(24)	(4)	17	37	58	78	99
	14,000	(22)	0	22	44	66	88	111
	15,000	(20)	4	28	51	75	99	122
	16,000	(17)	8	33	58	84	109	134
S	17,000	(15)	12	39	66	92	119	146
sqns	18,000	(13)	16	44	73	101	129	158
<u>e</u> s	19,000	(10)	20	50	80	110	140	170
Average	20,000	(8)	24	55	87	118	150	182
_ %	21,000	(6)	28	61	94	127	160	193
4	22,000	(3)	32	66	101	136	170	205
	23,000	(1)	36	72	108	144	181	217
	24,000	2	39	77	115	153	191	229
	25,000	4	43	83	122	162	201	241
	26,000	6	47	88	129	170	212	253
	27,000	9	51	94	137	179	222	264
	28,000	11	55	99	144	188	232	276
	29,000	13	59	105	151	197	242	288
	30,000	16	63	111	158	205	253	300

Source: J.P. Morgan estimates.

Table 6: CY11E PF EPS Sensitivity Relative to ARPUs and Average Subscribers

\$ in millions

					ARPU			
		\$0.30	\$0.50	\$0.70	\$0.90	\$1.10	\$1.30	\$1.50
	11,000	(0.49)	(0.27)	(0.05)	0.16	0.38	0.60	0.82
	12,000	(0.46)	(0.22)	0.02	0.25	0.49	0.73	0.96
	13,000	(0.43)	(0.17)	0.08	0.34	0.60	0.85	1.11
	14,000	(0.40)	(0.12)	0.15	0.43	0.71	0.98	1.26
	15,000	(0.37)	(0.07)	0.22	0.52	0.82	1.11	1.41
	16,000	(0.34)	(0.02)	0.29	0.61	0.92	1.24	1.56
S	17,000	(0.31)	0.03	0.36	0.70	1.03	1.37	1.70
ġ	18,000	(0.28)	0.07	0.43	0.79	1.14	1.50	1.85
Average subs	19,000	(0.25)	0.12	0.50	0.87	1.25	1.63	2.00
- ag	20,000	(0.22)	0.17	0.57	0.96	1.36	1.75	2.15
Ne	21,000	(0.19)	0.22	0.64	1.05	1.47	1.88	2.30
4	22,000	(0.16)	0.27	0.71	1.14	1.58	2.01	2.44
	23,000	(0.13)	0.32	0.78	1.23	1.68	2.14	2.59
	24,000	(0.10)	0.37	0.84	1.32	1.79	2.27	2.74
	25,000	(0.07)	0.42	0.91	1.41	1.90	2.40	2.89
	26,000	(0.04)	0.47	0.98	1.50	2.01	2.52	3.04
	27,000	(0.01)	0.52	1.05	1.59	2.12	2.65	3.19
	28,000	0.02	0.57	1.12	1.67	2.23	2.78	3.33
	29,000	0.04	0.62	1.19	1.76	2.34	2.91	3.48
	30,000	0.07	0.67	1.26	1.85	2.44	3.04	3.63

Source: J.P. Morgan estimates.

#### **Cash Flow and Balance Sheet Outlook**

As a software provider, TNAV has very low capex requirements and we expect it will generate strong cash flows – over \$30 million in FY11 and over \$40 million in FY12. Accounts receivable, at 78 days, are down y/y, and seem to be manageable. TNAV is collecting cash from a small number of very sizable telecommunications operators that represent very modest credit risks, in our view.

Table 7: Cash Flow Snapshot

\$ in millions

	FY07A	FY08A	FY09A	FY10E	FY11E	FY12E
Net Income (loss)	(9.6)	4.6	29.5	40.8	36.7	45.2
Depreciation and amortization	0.9	1.5	2.4	4.8	6.5	13.3
Stock-based compensation	0.1	0.5	0.5	4.9	5.1	6.5
Revaluation of preferred stock warrants	0.3	0.7	8.0	0.7	-	-
Accounts receivable	(1.4)	(10.8)	(9.4)	(9.5)	(10.4)	(9.7)
Other assets	(0.1)	(0.1)	(0.1)	(3.0)	(0.0)	(0.0)
Accounts payable	0.4	0.3	0.5	1.5	1.5	2.3
CASH FROM OPERATIONS	(6.6)	(0.3)	23.8	44.2	42.0	60.1
Capital expenditures	(2.5)	(1.7)	(7.8)	(10.9)	(8.1)	(11.4)
CASH FROM INVESTING	(2.5)	(1.7)	(7.8)	(10.9)	(8.1)	(11.4)
CASH FROM FINANCING	0.4	(0.0)	0.2	48.6	-	-
Effect of exchange rate	0.1	0.2	0.2	(0.1)	-	-
Change in cash	(8.5)	(1.9)	16.3	81.8	33.9	48.7

Source: Company reports and J.P. Morgan estimates.

The balance sheet is strong with plenty of cash and no debt. TNAV exited 3QFY10 with \$46.1 million of cash & equivalents, up 32% y/y. The proceeds of the IPO, about \$48 million, should position the company with about \$115 million of cash, exiting FY10.

Table 8: Balance Sheet Snapshot

\$ in millions

	FY07A	FY08A	FY09A	FY10E	FY11E	FY12E
Cash and cash equivalents	18.7	16.8	33.1	115.0	148.8	197.5
Accounts receivable, net	3.7	14.6	23.9	33.4	43.9	53.6
Prepaid expenses and other	0.6	0.6	2.8	5.4	5.4	5.4
Total current assets	23.3	32.1	62.0	155.8	200.1	258.6
Property and equipment, net	2.6	2.9	6.6	11.6	13.2	11.3
Total assets	26.6	36.0	72.2	176.0	221.9	278.4
Accounts payable	0.8	1.2	2.1	4.4	5.9	8.2
Accrued compensation	0.8	2.1	3.8	3.9	3.9	3.9
Accrued royalties	1.0	1.9	3.3	2.7	3.6	4.5
Other accrued expenses	1.6	1.8	1.9	4.9	6.5	8.1
Deferred revenue	1.4	2.4	3.5	5.3	5.3	5.3
Total current liabilities	5.7	9.4	14.6	21.2	25.3	30.1
Convertible preferred stock	47.2	50.2	51.4	56.0	56.0	56.0
Other	1.6	2.2	2.9	2.4	2.4	2.4
Total Liabilities	54.5	61.8	68.8	79.6	83.6	88.5
Total liabilities and stockholders' equity	26.6	36.0	72.2	176.0	221.9	278.4

## Valuation and Rating Analysis

We are initiating coverage of TNAV with an Overweight rating, meaning that we expect the stock to outperform the mean of our coverage universe over the next 6-12 months. At a closing price of \$8.45 on June 21, TNAV is trading at 9.0 times CY11E PF EPS of \$0.94, which is a 49% discount to the mean of our coverage universe. We believe this discount reflects investors' concerns relating to declining ARPUs and margins, the competitive threat from Nokia and Google, and the risks associated with an early-stage company that has just gone public. We believe the stock is substantially 'de-risked' at this level and technology investors are presented with a very intriguing GARP stock.

**Execution should earn higher multiple in time.** We take the view that TNAV is a category-defining SaaS company, and can earn multiples that are comparable with high-growth companies in that software category; however, in the context of near-term declining ARPUs and margins, competitive threats, and business model risk, we believe this is a stretch as of today. TNAV needs to earn a higher multiple through execution. We believe investors need to see evidence of continued adoption of carrier-branded TBT navigation.

Taking a more conservative stance, we believe TNAV can be compared to software-based companies that are focused on the telecommunications industry, which include companies such as Amdocs, Neustar, and Synchronoss. The median multiples for this category of companies are 11.5 times CY11E P/E and 5.9 times CY11E EV/EBITDA. Using these multiples yields a valuation range of \$10.80 (P/E basis) to \$13.50 (EV/EBITDA). We think this valuation range is conservative for several reasons: 1) the comp group does not exhibit as strong a growth outlook as TNAV, 2) we believe (higher) CY12 earnings will be a consideration for investors soon, and 3) we believe the company can be awarded a SaaS-like multiple with good execution over the next several quarters.

Our December 31, 2010 price target is \$13.50 based on an assigned multiple of 6 times CY11E PF EBITDA of \$84.7 million; the multiple is based on the comms software/services peer group multiple. The market cap takes into consideration \$115mm of cash post IPO, and assumes zero debt. We use a post-IPO share count of 46 million shares to calculate our per-share price target.

Table 9: TNAV Trades at a Significant Discount to its Peers

TeleNav: Trading multip			comparabl	le compa	nies												
\$ in millions, except per share data	and as indic	ated; Financia	al data as of 06	6/21/2010													
Name	Price	Mkt Cap	EV		P/E		EV	/ Revenue		E	EV / FCF		EV	/ / EBITDA		LTG	PEG (FY2)
				CY09	CY10	CY11	CY09	CY10	CY11	CY09	CY10	CY11	CY09	CY10	CY11		(1-12)
Category-defining software																	
AUTONOMY CORP PLC CONCUR TECHNOLOGIES INC SOLARWINDS INC SUCCESSFACTORS INC TALEO CORP-CLASS A LOGMEIN INC	\$28.96 \$44.19 \$18.51 \$22.29 \$25.60 \$27.26	\$6,999 \$2,204 \$1,258 \$1,614 \$1,018 \$627	\$6,877 \$2,164 \$1,179 \$1,276 \$782 \$488	27.7x 52.7x 29.4x nm 33.2x 46.2x	23.4x 54.0x 25.1x nm 35.2x 40.2x	20.2x 42.4x 19.4x nm 27.2x 42.1x	9.3x 8.3x 10.1x 8.3x 3.9x 6.6x	7.6x 6.9x 7.4x 6.9x 3.4x 5.3x	6.7x 5.8x 5.7x 5.6x 3.0x 4.4x	32.5x 43.3x 25.4x nm 18.8x 23.3x	24.1x 39.0x 28.7x nm 29.6x 42.7x	20.0x 33.9x 21.7x 36.2x 22.2x 43.7x	19.5x 31.7x 25.7x nm 30.2x 39.1x	13.9x 23.3x 15.4x nm 15.3x 22.0x	11.9x 19.0x 11.7x nm 12.3x 16.1x	19.37 26.30 21.50 31.00 23.00 17.50	1.04 1.61 0.90 na 1.18 2.40
Mean Median				37.9x 33.2x	35.6x 35.2x	30.3x 27.2x	7.8x 8.3x	6.2x 6.9x	5.2x 5.7x	28.7x 25.4x	32.8x 29.6x	29.6x 28.1x	29.2x 30.2x	18.0x 15.4x	14.2x	23.11 22.25	1.43 1.18
Mobile Internet platform				33.28	33.2X	21.28	0.38	0.91	3.7 X	23.41	29.01	20.13	30.28	13.41	12.38	22.23	1.10
APPLE INC GOOGLE INC-CL A RESEARCH IN MOTION VALUECLICK INC	\$270.17 \$488.56 \$60.07 \$12.05	\$245,838 \$155,600 \$32,397 \$980	\$222,683 \$129,086 \$30,486 \$820	33.5x 21.1x 14.0x 13.2x	19.3x 17.5x 11.4x 15.5x	16.3x 15.2x 10.2x 14.2x	5.3x 7.4x 2.1x 1.9x	3.6x 6.1x 1.7x 2.0x	3.0x 5.3x 1.4x 1.9x	22.2x 15.2x 17.0x 6.9x	16.4x 14.7x 12.6x 10.5x	14.5x 12.5x 9.8x 11.4x	16.1x 13.1x 7.9x 7.1x	11.8x 10.0x 6.4x 7.1x	9.9x 8.6x 5.6x 6.6x	18.00 19.85 19.25 11.83	0.91 0.77 0.53 1.20
Mean Median				20.4x 17.5x	15.9x 16.5x	14.0x 14.7x	4.2x 3.7x	3.3x 2.8x	2.9x 2.5x	15.3x 16.1x	13.5x 13.6x	12.0x 11.9x	11.0x 10.5x	8.8x 8.5x	7.7x 7.6x	17.23 18.63	0.85 0.84
Comm/carrier services																	
AMDOCS LTD SYNIVERSE HOLDINGS INC NEUSTAR INC-CLASS A SYNCHRONOSS TECHNOLOGIE TELECOMMUNICATION SYSTEN INFOSPACE INC	\$28.05 \$19.76 \$21.58 \$20.57 \$4.69 \$7.74	\$5,769 \$1,378 \$1,618 \$644 \$248 \$277	\$4,408 \$1,787 \$1,282 \$558 \$354 \$194	13.0x 12.4x 15.5x 36.1x 5.2x 14.1x	12.2x 10.5x 13.5x 33.4x 7.5x 13.5x	11.5x 9.7x 11.7x 24.2x 7.2x 11.6x	1.5x 3.7x 2.7x 4.3x 1.2x 0.9x	1.4x 2.9x 2.4x 3.6x 0.8x 0.7x	1.3x 2.7x 2.2x 3.1x 0.7x 0.7x	10.1x 17.1x 8.6x 31.6x 6.8x 7.0x	9.9x 21.0x 8.3x 31.4x na	9.7x 18.9x 9.8x na na	7.3x 9.0x 6.1x 20.3x 8.2x 11.5x	6.5x 7.0x 5.5x 13.4x 4.6x 6.0x	6.2x 6.4x 4.9x 10.5x 3.8x 5.7x	11.98 14.17 13.50 27.50 12.00 42.50	0.96 0.68 0.87 0.88 0.60 0.27
Mean Median				16.0x 13.5x	15.1x 12.8x	12.6x 11.5x	2.4x 2.1x	2.0x 1.9x	1.8x 1.8x	13.5x 9.3x	17.6x 15.5x	12.8x 9.8x	10.4x 8.6x	7.2x 6.2x	6.2x 5.9x	20.28 13.83	0.71 0.77
Navigation GARMIN LTD TOMTOM TRIMBLE NAVIGATION LTD	\$32.03 \$5.30 \$30.44	\$6,379 \$1,449 \$3,692	\$5,068 \$1,641 \$3,547	9.1x 10.3x 29.3x	11.0x 8.1x 21.7x	11.6x 7.6x 17.9x	1.7x 1.1x 3.1x	1.7x 1.1x 2.8x	1.8x 1.1x 2.5x	4.8x 5.1x 19.5x	6.2x 14.2x nm	7.2x 12.7x 29.9x	5.7x 5.5x 21.7x	6.6x 5.6x 14.4x	6.9x 5.5x 12.7x	8.75 10.00 17.57	1.33 0.76 1.02
Mean Median			. ,	16.2x 10.3x	13.6x 11.0x	12.4x 11.6x	2.0x 1.7x	1.9x 1.7x	1.8x 1.8x	9.8x 5.1x	10.2x 10.2x	16.6x 12.7x	11.0x 5.7x	8.9x 6.6x	8.4x	12.11 10.00	1.04 1.02
Overall mean Overall median				23.1x 18.3x	20.7x 16.5x	17.8x 14.7x	4.4x 3.7x	3.6x 2.9x	3.1x 2.7x	17.5x 17.0x	20.6x 16.4x	19.6x 16.7x	15.9x 12.3x	10.8x 8.5x	9.1x 7.7x	19.24 18.00	1.00 0.91
TeleNav (JPM estimates)	\$8.45	\$389	\$274	7.5x	8.2x	9.0x	1.9x	1.4x	1.2x	16.1x	8.4x	6.7x	4.4x	3.5x	3.2x	9.93	0.91

Source: Bloomberg.

Note: Estimates based on Bloomberg consensus estimates unless otherwise noted.

## **Industry Overview**

**TeleNav** is a leading provider of software and services used to power carrier-branded TBT navigation and mobile search solutions in North America and internationally. TBT and mobile search are early-stage examples of LBS, which will expand to include mobile resource management (MRM), LBA, mobile social networking applications, mobile commerce, and other applications and services.

**TBT** navigation goes mainstream with cheap smartphones. TBT navigation is made possible by the convergence of digital maps, vectorized geographic information, network-assisted global positioning systems (GPS), high-speed wireless networks, wireless data infrastructure, and the availability of inexpensive feature phones and smartphones that support multi-tasking applications.

**TeleNav is a leader in TBT navigation.** There are multiple participants in the mobile navigation value chain, but TeleNav has emerged as a leading participant in the emergent space, powering the Sprint Navigator and AT&T Navigation applications, Ford's SYNC TBT solution, as well as MRM solutions for use by business customers.

Maps, GeoSpatial Data
- TeleAtlas GPS Chipsets Modules & Components - Google - Broadcom Alcatel - CSR - Trimble Navigation PND Devices POT Info - TomTom - AAA - Retail Banks GPS Chipsets & Components Auto/OEM - Alpine - Contin Local Advertisers Aggregators - Admob Auto In-Dash Navigation Based - AT&T Interactive - Delphi Satellite, Aeria City Search - OpenTable - Digital Globe - GeoEye - RapidEye - Apple Maps - Blackberry MAPS - TeleNav - AT&T - HTC Motorola - Nokia Systems (NIM) - Google - Microsoft - Nokia MRM - TeleNav

Figure 5: Mobile Navigation Value Chain Diagram

Source: J.P. Morgan.

**Adoption of LBS expected to follow a steep adoption curve.** LBS, including TBT navigation, mobile internet search, and LBA, are growing rapidly, following the trajectory of other recent consumer-facing technology innovations, such as the internet, mobile phones, and mobile email.

250.0% 225.0% Mobile phone subs 175.0% 150.0% 125.0% Domestic vehicle registrations 100.0% Worldwide mobile PC shipmen Global LCD TV shipm Broadband users Televisions produced 50.0% Households with a PC (US) Radios produced DBS subs ED prescriptions Blackberries Mobile transmitter units  $1901 \quad 1905 \quad 1909 \quad 1913 \quad 1917 \quad 1921 \quad 1925 \quad 1929 \quad 1933 \quad 1937 \quad 1941 \quad 1945 \quad 1949 \quad 1953 \quad 1957 \quad 1961 \quad 1965 \quad 1969 \quad 1973 \quad 1977 \quad 1981 \quad 1985 \quad 1989 \quad 1993 \quad 1997 \quad 2001 \quad 2005 \quad 1999 \quad$ 

Figure 6: The Speed at Which New Technologies Are Adopted in the Mass Market Has Accelerated

Source: U.S. Census, International Telecommunications Union, Computer History Museum, and J.P. Morgan estimates. Note: Penetration expressed as a percentage of U.S. households.

The addressable market for TBT navigation and mobile search is vast. Whereas PC/laptop-based access to the internet can be measured in hundreds of millions of users, the wireless or mobile internet will extend to more than five billion subscribers globally, assuming growing adoption of wireless data plans and applications.

Table 10: We Expect over Five Billion Wireless Subscribers, Globally, in 2010

Subscribers in millions

	2008	2009	2010E	2011E
N. America	292	309	324	337
APAC	605	711	810	919
China	619	726	810	919
Japan	106	111	115	122
Korea	46	48	51	52
India	353	540	679	827
Europe	497	513	531	544
S. America	452	505	559	598
EEMEA	1,018	1,177	1,324	1,453
Total	3,988	4,640	5,203	5,771

Source: J.P. Morgan estimates (Rod Hall, Telecom Equipment Analyst).

Wireless operators seek revenue growth in subscriber loyalty and data ARPUs. Subscriber growth should inevitably slow as wireless data markets mature. However, wireless data revenues per subscriber continue to grow. In the U.S., there are likely to be more than 290 million subscribers in 2010 (Michael McCormack, J.P. Morgan Analyst), and wireless voice average revenue per user (ARPU) is declining at about a 7% CAGR, but data ARPUs should grow at a 7% CAGR through 2013.

\$40 ¬ \$38.08 \$34.74 \$32.37 \$29.92 \$27.71 \$30 \$25.97 \$24.58 \$19.97 \$19.33 18.36 \$17.00 \$20 \$15.62 \$14.07 \$11.30 \$10 \$0 2008 2009 2010 2011 2012 2013 2013 ■ Voice ARPU ■ Data ARPU

Figure 7: In the U.S., Declining Voice ARPUs Are Offset by Growing Data ARPUs

Source: J.P. Morgan estimates (Michael McCormack, Telecommunications Services Analyst).

Much of the growth in wireless data is driven by smartphone shipments, for which wireless data plan attach rates are close to 100%. Smartphones, many priced at under \$200, now feature powerful CPUs, gigabytes of memory, 3G broadband data transmission capabilities, large-format touch screens, and flexible operating systems that support powerful applications.

Smartphone growth to top 38% CAGR through 2015. J.P. Morgan's telecom equipment analyst, Rod Hall, forecasts that smartphone shipment growth will exceed 38% compounded annually through 2015, and that smartphones will represent more than 50% of all handset shipments by 2013. Turn-by-turn navigation is preprovisioned on the majority of smartphones, often by the carrier, and TeleNav therefore benefits from the growth of the consumer product category.

Table 11: Smartphones Will Represent More than 50% of All Handset Shipments by 2013 Millions of units

	2009	2010E	2011E	2012E	2013E	2014E	2015E	% CAGR
Handsets	1,140	1,290	1,407	1,464	1,508	1,538	1,569	5.5%
% change y/y		13%	9%	4%	3%	2%	2%	
Smartphones	176	266	393	629	829	1,000	1,223	38.1%
% change y/y		51%	48%	60%	32%	21%	22%	
Smartphone Subs	460	549	704	1051	1536	2067	2613	33.6%
% change y/y		19%	28%	49%	46%	35%	26%	
Other Subs	4,179	4,684	5,112	5,093	4,982	4,776	4,512	1.3%
% change y/y		12%	9%	0%	-2%	-4%	-6%	
Total Subs	4,639	5,233	5,816	6,144	6,518	6,843	7,125	7.4%
% change y/y		13%	11%	6%	6%	5%	4%	
% Smartphones/Total	15%	21%	28%	43%	55%	65%	78%	
% Smartphone Subs/Total	10%	10%	12%	17%	24%	30%	37%	

Source: J.P. Morgan estimates (Rod Hall Telecom Equipment Analyst)

**GPS feature phones drive TBT adoption, too.** TBT navigation is also being preprovisioned by wireless operators on a broader range of GPS-enabled feature phones. IDC forecasts that over 40% of handsets will be GPS-enabled by 2014, yielding unit shipments of over 680 million.

Table 12: Beyond Smartphones, GPS-Enabled Handset Growth Will Be Significant

Millions of units

	2009	2010E	2011E	2012E	2013E	2014E	% CAGR
3G+ handsets with GPS	140.8	205.1	279.7	364.3	446.9	519.3	29.8%
2G handsets with GPS	139.9	157	174.2	168	165.2	163.9	3.2%
Total	280.7	362.1	453.9	532.3	612.1	683.2	19.5%
% total handsets	25%	28%	32%	36%	41%	44%	

Source: IDC.

PND growth will be eclipsed by TBT navigation on mobile phones. Consumers will continue to conduct navigation on Personal Navigation Devices (PNDs), which feature "on-board" maps, POI, and other information; however, we believe this niche category will be overtaken rapidly by "off-board" solutions (typically handset-based) that capture real-time map updates, traffic conditions, and POI data, bundled with personal information on the ever-handy mobile phone.

Table 13: U.S. Personal Navigation Device Unit Growth Will Plateau and Decline Units in millions

				PND Penetration		
Year	US Households	Passenger Cars	GPS Unit Sales	Household %	Car %	
2005	113.3	136.6	3.641	3.21%	2.67%	
2006	114.4	137.2	5.465	4.78%	3.98%	
2007	115.4	137.8	12.100	10.48%	8.78%	
2008E	111.8	138.4	15.670	14.02%	11.32%	
2009E	113.3	139.0	16.470	14.54%	11.85%	
2010E	114.4	139.6	17.940	15.68%	12.85%	
2011E	114.8	140.2	17.200	14.98%	12.27%	
2012E	115.1	140.8	16.210	14.08%	11.51%	

Source: IDC, Canalys, and J.P. Morgan estimates.

Maps and navigation are important drivers of ARPU. According to ComScore, nearly 73 million U.S. wireless subscribers accessed their mobile phone browsers in April 2010, up 31% y/y, and nearly 70 million accessed applications, up 28% y/y. Between 78% and 80% of smartphone users accessed their browser or applications in April 2010, or 17-19% of feature phone users.

Application use on mobile phones is increasing across all categories, with the strongest growth in social networking. Map applications are among the most used applications (over 18 million users) and grew 93% y/y. Separately, comScore reports a 68% increase in mobile TBT navigation subscribers in Western Europe in April 2010, to about 42 million subscribers.

Table 14: Mobile Users Are Increasing Access of Applications, Including Maps and Navigation

Category	Apr-09	Apr-10	% Change
Total Audience: 13+ yrs old	232,000	234,000	1%
Used application (1)	54,414	69,639	28%
Weather	8,557	18,063	111%
Maps	8,708	16,773	93%
Social Networking	4,270	14,518	240%
Search	5,434	10,315	90%
News	4,148	9,292	124%
Sports Information	3,598	7,672	113%
Movie Information	3,296	6,359	93%
Photo/Video Sharing Service	3,131	5,950	90%
Bank Accounts	2,340	4,974	113%
Online Retail	1,416	2,701	91%

Source: comScore MobiLens. Note (1) excludes games.

**LBS revenue could top \$8 billion by 2011.** LBS include mobile navigation, mobile commerce, location-based applications, mobile resource management, asset tracking, people tracking, and mobile search. In 2008, Gartner forecast LBS subscriber growth of nearly 77% from 2009 to 2011, yielding revenue CAGR of 73%. Gartner estimates that there will be nearly 300 million subscribers by 2011.

Table 15: Gartner Forecast Very Strong LBS Growth through 2011

Subscribers in millions, \$ in millions

					% CAGR
	2008	2009	2010E	2011E	2009-2011E
LBS Subscribers					
W. Europe	3.6	12.1	29.5	55.3	114%
N. America	14.7	27.2	48.7	71.5	62%
APAC	15.4	36.1	68.1	117.2	80%
Japan	9.4	20.0	35.6	54.1	64%
Total	43.2	95.3	181.9	298.0	77%
LBS Revenue					
W. Europe	\$161.2	\$519.2	\$1,225.6	\$2,291.8	\$110%
N. America	\$491.3	\$862.6	\$1,522.5	\$2,173.9	59%
APAC	\$386.0	\$811.1	\$1,525.1	\$2,551.6	77%
Japan	\$268.8	\$524.7	\$829.9	\$1,073.0	43%
Total	\$1,307.3	\$2,717.6	\$5,103.1	\$8,090.3	73%

Source: Gartner, 2008.

**LBA** could top \$18 billion by 2015. J.P. Morgan Telecomm Equipment analyst, Rod Hall, estimates that mobile search will yield an \$18 billion market opportunity by 2015. Assumptions include: by 2015 smartphones will represent 80% of all handset shipments, LBS adoption will reach 80% penetration (of smartphones), users will conduct about 1.0-1.25 searches a month, and each mobile search will generate.\$0.46 of revenue. In addition, the model assumes that adoption of LBA/search among non-smartphone users will also occur but only reach ~15% with a lower value per query as compared to smartphone users.

Table 16: The Mobile "Yellow Pages" Market Size Estimates and Supporting Assumptions

	2008	2009E	2010E	2011E	2012E	2013E	2014E	2015E
Global mobile subscribers (m)	3,970	4,626	5,183	5,705	6,144	6,518	6,842	7,125
Global handset shipments (m)	1,219	1,077	1,126	1,183	1,230	1,267	1,292	1,318
Global smartphone shipments (m)	155	164	248	414	590	760	905	1,054
Smartphones as a % of total handsets	13%	15%	22%	<i>35%</i>	48%	60%	<i>75%</i>	80%
Replacement handsets (m)	45	86	177	235	272	335	459	645
Smartphone subscribers (m)	370	448	519	698	1,016	1,442	1,887	2,297
Adoption rate (%)	14%	23%	35%	50%	65%	80%	80%	80%
Searches monetized / user / month (#)	1.00	1.00	1.10	1.15	1.25	1.30	1.40	1.40
Implied revenue / search (US\$)	0.48	0.43	0.46	0.46	0.46	0.46	0.46	0.46
Revenue from smartphone users (\$m)	295	522	1,093	2,196	4,518	8,205	11,566	14,075
Non-smartphone subs (m)	3,600	4,178	4,664	5,007	5,128	5,077	4,955	4,828
Adoption rate (%)	7%	9%	11%	13%	15%	15%	15%	15%
Queries / user / month (#)	1.00	1.00	1.05	1.10	1.20	1.25	1.25	1.25
Revenue / query (US\$)	0.40	0.36	0.38	0.38	0.38	0.38	0.38	0.38
Revenue from non-smartphone users (\$m)	1,210	1,625	2,457	3,265	4,209	4,340	4,237	4,128
Total Revenue (\$m)	1,504	2,147	3,550	5,461	8,727	12,545	15,803	18,203

Source: J.P. Morgan estimates.

Assuming that the smartphone subscriber base at end 2008 was 260mm.

MRM revenues could reach \$1 billion by 2014. MRM represents a contiguous LBS market that TeleNav is poised to pursue, directly and via the wireless carrier channel. TNAV already has more than 9,000 small to medium-sized business customers of the TeleNav Track service, partnering with AT&T, Sprint, and Verizon; however, the revenue contribution is currently modest.

Frost & Sullivan pegs the MRM market as a \$973 million market opportunity by 2014, and defines MRM as incorporating both handset-based and in-vehicle technology that uses wireless and location technologies to locate, track, and manage mobile workers, tasks, and assets.

Table 17: The U.S. MRM Market Could Approach \$1.0 Billion by 2014

\$ in millions, subscribers in millions

	2008	2009	2010E	2011E	2012E	2013E	2014E	5-Year CAGR
Total Revenues	\$86.29	135.6	209.44	346.31	529.36	744.17	973.4	48%
% change y/y		57%	54%	65%	53%	41%	31%	
Total Subscribers	0.46	0.7	1.04	1.67	2.51	3.51	4.56	45%
% change y/y		52%	49%	61%	50%	40%	30%	

Source: Frost & Sullivan, 2009.

#### TBT OEM solutions for 30 million auto OEMs a year also a possibility.

Approximately 30 million passenger vehicles ship in North America and Europe each year, normalized for the economic cycle. We are seeing evidence of increased adoption of TBT navigation solutions in the driver dashboard. GM Onstar was an early provider of concierge-type solutions and the solution will soon be enhanced by the inclusion of Google TBT (service will be called "eNav"). This puts GM into a more competitive position versus Ford, which introduced TBT navigation (powered by TeleNav) into their SYNC platform and is making it available on all 2010/2011 Ford and Lincoln vehicles. Luxury automobiles, such as Mercedes and BMW, also come with an in-cockpit concierge service, which includes TBT navigation (powered by ATX Group). We believe TBT will prevail as an OEM solution over in-dash PND solutions, owing to the ability to provide "off-board" real-time data, and because voice interaction reduces driver distraction.

We believe, in time, all vehicles will come equipped with TBT navigation, or a console system that supports it as an option, implying an annual addressable market of 30 million (passenger) vehicles in N. America and Europe, alone.

## **Company Overview**

TeleNav is addressing several large market opportunities relating to LBS, LBA, MRM, and the narrowly defined TBT navigation market. The company has 15 million subscribers on its system, 9,000 SMB customers, and major telco customers (e.g., Sprint and AT&T), and supports over 500 models of mobile phone, integrates with all major operating systems, and has one of the broadest product and service offerings in the industry.

Table 18: TeleNav Has Established Relationships with Tier 1 Customers and Technology Partners

Carrier	Subs	TBT provider <sup>1</sup>	Branding of TBT	Pricing	Positioning	Platforms/devices <sup>2</sup>
AT&T	87mm	TeleNav	AT&T Navigator	\$2.99/day \$9.99/month \$99/year \$249/unlimited	Pre provisioned Free download + 30 day free trial	Apple (2 devices), AT&T (6), HTC (5), HP (5), LG (5), Motorola (10), Nokia (7), Palm (5), Pantech (9), RIM (13), Samsung (16), Sony-Ericsson (8), Symbol (1)
Sprint	48mm	TeleNav	Sprint Navigation	Included in some voice and data plans such as Simply Everything Plan \$2.99/day \$9.99/month	Pre provisioned Free download + 5 days free trial	HTC (6 devices), LG (8), Motorola (13), Palm (9), RIM (9), Samsung (19), Sanyo (18), Sprint (1)
T-Mobile	34mm	TeleNav	TeleNav GPS Naviga	att \$9.99/month	Free download + 30 day free trial	Danger (1 device), Huawei (1), HTC (5), Motorola (2), Nokia (2), RIM (6), Samsung (6), Sony Ericsson (2)
Verizon	93mm	Networks In Motion	VZ Navigator	Included in some voice and data plans such as Get It Now \$2.99/day \$4.99/week \$9.99/month	Free download + 30 day free trial	Feature phones, RIM, Windows Mobile, Palm, Android

Source: Company reports and J.P. Morgan.

Notes: <sup>1</sup> Does not reflect free navigation providers.

Multiple growth opportunities. Looking forward, we believe growth will be centered on 1) deepening penetration of existing carrier subscriber populations (e.g., Sprint, AT&T), 2) expanding geographic footprint (China, South & Central America, Europe), 3) expanding into contiguous markets (MRM, Auto OEM, Enterprise solutions, Social Networking), and 4) location-based advertising.

<sup>&</sup>lt;sup>2</sup> To check complete listing of TeleNav carrier line-up and respective available devices, visit <a href="http://www.telenav.com/products/tn/devices/">http://www.telenav.com/products/tn/devices/</a>.

Figure 8: TeleNav's Growth Agenda M-Navigation/LBS **Global Market** • China Mobile • Bell & Rogers Telcel **Other M-Internet** Vivo **Opportunities** • EU carriers • In-dash • M-ad/commerce M-Navigation/LBS • Enterprise LBS Premium Services **US Market**  AT&T Sprint • TMO Verizon Others Revenue 4% 88% (FY09)

Source: Company data and J.P. Morgan.

In the context of TeleNav's growth agenda, we believe the international growth opportunity, especially in China, is the largest.

Table 19: The Largest Opportunity for TNAV May Be International

Carrier	Subscribers	Location	Tech Partners	Service
AT&T	87 million	US	ADP	BPO outsourcing
Sprint	48 million	US	CitySearch	Local advertisers
T-Mobile	34 million	US	InfoUSA	POI data
Verizon	93 million	US	INRIX	Traffic information
Bell	7 million	Canada	Motorola	Handsets
Rogers	7 million	Canada	Navteq	Map data
China Mobile	522 million	China	Nokia	Handsets
T-Mobile	17 million	UK	Palm	Handsets
Telcel	58 million	Mexico	RIM	Handsets
Vivo	48 million	Brazil	Samsung	Handsets
Alltel	11 million	US	Sanyo	Handsets
Boost Mobile	3.1 million	US	SiRF	LBS solutions
NII Holdings	3.4 million	S.America	TeleAtlas	Maps
			yp.com	POI data

Source: Company reports.

TeleNav products and services include TBT navigation for mobile phones (TeleNav GPS Navigation), Mobile Resource Management (TeleNav Track), in-dash auto solutions (TBT navigation for the Ford SYNC platform), a showcased PND product (Shotgun), and several innovative social networking applications (Sipity, OnMyWay, and Whereaboutz).

Table 20: TNAV's Product and Service Offerings

	Mobile Navigation	Mobile Resource Management	In-Dash Navigation	Other LBS Solutions
Products	GPS Navigator	TeleNav Track TeleNav Vehicle Manager TeleNav Vehicle Tracker TeleNav Asset Tracker	-2010-2011 Ford & Lincoln models sold in North America today in partnership with Microsoft SYNC	Location-Based Advertising Shotgun (PND) Whereaboutz Sipity OnMyWay
Description	Voice-guided, real-time, turn-by-turn, mobile navigation service accessed primarily through mobile phones Core functions: -voice-guided, turn-by-turn directions; -3D moving maps; -automatic rerouting for missed turns; -over 13 million searchable POIs in North America, including restaurants, hotels, ATMs, Wi-Fi hotspots, and gas stations; -search along route; and integration with contacts. Enhanced connected features: -updated maps, POIs, real-time traffic, gas prices, and weather information; -voice recognition for address input and local business and POI searches; -traffic-optimized routing, intelligent one-click navigation rerouting, and updated ETA based on traffic flow; -POI reviews, including end user generated reviews; -real-time traffic alerts specific to a chosen route; -preplanned routes that can be saved, downloaded to mobile phones, and accessed with one click; -address sharing.	MRM solutions allow enterprises to monitor and manage mobile workforces and assets Key features: -voice-guided, turn-by-turn directions to navigate workers to their destinations; -real-time and historical reports of the location of the mobile workforce and routes taken and transit times as compared to optimal routes and ideal transit times; -updated job status information to improve efficiency and productivity in connection with assignments; -automatic alerts when workers or vehicles enter or exit a specific area, have stopped, or are speeding; -customizable wireless forms to capture field information and improve communication, including job details, signatures, and barcode scans; -wireless timecards to improve payroll accuracy and workforce time and attendance; -integration with enterprise back-end systems and applications.	Mobile navigation services through connected in-dash systems. TNAV's technology powers in-dash navigation service that provides updated and connected real-time LBS to drivers. TNAV is developing an in-dash navigation service that will incorporate navigation software loaded in the vehicle and a connected service to deliver real-time traffic information, gas prices, and frequently updated maps. TNAV intends to leverage the LBS platform, its end-user base, and real-time content, including usergenerated content, to provide in-dash navigation features and functions and enhance the end-user experience.	Location-based mobile advertising Internet-connected PND Social networking LBS applications In October 2009, TNAV deployed mobile location-based advertising services to a limited number of end users -TeleNav Shotgun, a two-way, Internet-connected PND, released in 2008 -Whereboutz - social networking application which allows end users to share their location and status with friends online or via mobile phones -Sipity - a social networking application which connects end users based upon their locations and interests -OnMyWay - a social networking application which automatically notifies a person (or a group of people) of the user's trip status and estimated time of arrival via text message or email

Source: Company filings.

**TeleNav GPS Navigation.** Today nearly 90% of TeleNav revenues are represented by GPS navigation subscription revenues. The firm has nearly 15 million subscribers to its service, mostly at Sprint (bundled) and AT&T (monthly recurring charge). The company is paid approximately \$1.00 per subscriber per month when bundled, and as much as \$9.99 per month at AT&T. The company is rapidly introducing new features on each of the operating systems for which the client solution is designed (Apple, Microsoft, Blackberry, Palm, Brew, Linux, Android, Symbian).

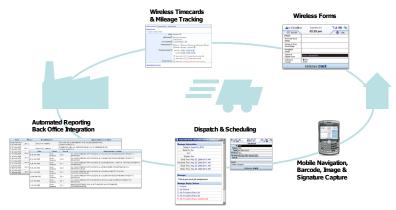
Figure 9: TeleNav Navigation Features Are Continuously Expanding Platform: Java/BREW



Source: Company reports.

**TeleNav Track is an enterprise-grade software-based solution** for mobile workforce management, and asset, task, and people tracking, which integrates with CRM and back-office workforce management systems (e.g., ADP, Kronos, Quickbooks). The system supports improved dispatching and scheduling, wireless forms, time-keeping, mileage tracking, and barcode/image/signature capture. Customers of TeleNav Track include: Transcare, Diagnostic Labs, A&R Wholesales Distributors, Federated Service Solutions, Med Legal, Western Towing, the City of New York, and Anaheim Union School District.

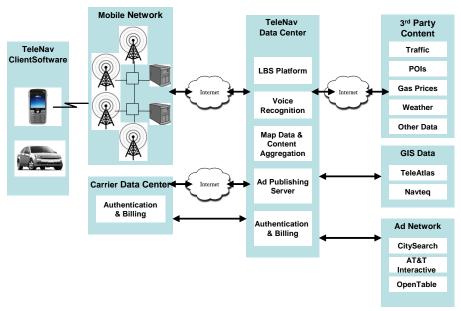
Figure 10: TeleNav Track Delivers Enterprise-Grade Capabilities



Source: Company reports and J.P. Morgan.

TeleNav provides off-board navigation, meaning that the maps, navigation instructions, and POI information is provided in real time over the air, from a datacenter. The information is constantly refreshed (unlike a PND) and the application can be continuously upgraded. The application, or software as a service (SaaS), is hosted in the TeleNav Data Center. Building blocks of the application include a LBS Platform (which enables the routing of relevant information to the user based on XY coordinates, in the appropriate format), voice recognition software, authentication and billing systems, and an ad publishing platform. Source information includes GIS data, principally from TeleAtlas and Navteq, POI information from multiple third-party sources, and local advertisements provided by ad networks such as CitySearch, Yelp, or direct from advertisers (e.g., Best Western).

Figure 11: TeleNav Platform

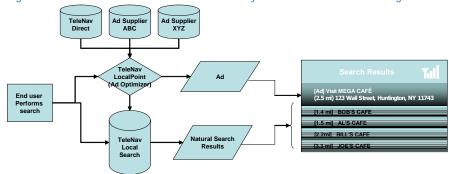


Source: Company reports and J.P. Morgan.

We see LBA as a natural extension of mobile navigation and mobile search, and we believe TeleNav is well positioned to pursue this opportunity, competing effectively against much larger companies, such as Google and Nokia. Aside from the fact that TeleNav already has the ability to reach 15 million subscribers, the company's platform can be (and is being) extended to incorporate and deliver paid-positioning (on search), coupons, and mobile banner ads. Importantly, we believe TeleNav is able to implement ad-based search in a manner that does not undermine the wireless operator's relationship with the subscriber, and which yields revenue share to the wireless operator.

We believe TeleNav is positioned to realize \$0.20-\$0.50 per billable event. The revenue-share model will favor TeleNav or the operator depending on who sourced the advertiser.

Figure 12: The TeleNav Platform Enables the Delivery of Location-Based Advertising



Source: Company reports and J.P. Morgan.

### Competition

Telecommunications Systems (acquirer of Networks in Motion) is TeleNav's closest direct competitor, as a white-label TBT navigation solution provider (for Verizon).

TeleNav is also now competing with "free" navigation solutions from Nokia and Google ("Google Experience" versions of the Android platform). Microsoft has also announced its intention to offer free turn-by-turn navigation on Version 6.0 and higher of Windows Mobile.

Free navigation is a threat, but it can be contained. We believe TeleNav is well positioned to defend against the threat of "free" navigation, primarily because of its close partnership with the wireless operators. First, wireless operators still control which applications will be pre-provisioned on the majority of handsets, including a subset of Android handsets. Second, it's worth remembering that Android and Nokia represented less than 15% of all smartphone sales in 1Q10 in N. America; Samsung, LG, HTC, Blackberry, Motorola, Palm, and others are important suppliers and often deliver product that aligns with the carrier specifications. Third, we believe wireless operators will increasingly move to bundling TBT navigation, and as such, it is perceived to be free by consumers. Finally, owing to a strong R&D presence in China, we believe TNAV has a significant advantage in that nascent market. Finally, TeleNav is introducing its own ad-based navigation capabilities, competing head on with industry giants, not only in TBT navigation but also in the broader mobile search category.

TeleNav competes with "on-board" navigation from the PND vendors, such as Garmin, TomTom, and Mio. Garmin and TomTom have developed applications that can run on mobile phones too. We believe the PND market will plateau and decline as consumer adoption of TBT navigation on mobile phones expands. Off-board navigation provides real-time information, applications can be updated regularly, and provides reach into a deeper database of information, and is always on, always available being on the consumer's ever-present mobile phone.

There are a number of smaller companies that are also in the TBT Navigation space, including Telmap, Jentro, Appello Systems, ALK Technologies, and Route 66.

In MRM, TeleNav is competing against Trimble, Qualcomm, and other enterprise-grade solutions companies.

In the Auto/OEM segment, TeleNav competes against GM Onstar (now including Google), ATX Group, PND (Garmin, TomTom), and OEM suppliers (e.g., Denso, Alpine, Harman International).

Figure 13: TeleNav Is Aligned with Carriers, Is Focused on LBS, and Is Operating Systems Agnostic

	TeleNav	Google	Nokia	Garmin TomTom	NIM (TeleCommunication Systems)
Mobile N avigation / LBS Focus		e			
Carrier Alignment & Established Partnerships		•	¢		•
Platforms & Device Coverage		•	•	•	•
Features & LBS Product Portfolio					

Source: J.P. Morgan.

#### Management

We have been monitoring TeleNav's progress for nearly ten years and we are tremendously impressed by H.P. Jin, the CEO, who took this company from a very early-stage venture through to a company that occupies a leadership position in the nascent LBS industry, employing over 800 staff, and which partners with some of the most demanding customers in the world of telecommunications and technology. We think the company is run in a prudent manner, but has a very strong culture of innovation, which we think is unique. Dr. Jin has also established a global organization from the get-go.

Mr. Miller, the CFO, has impressed us with his steady piloting of the IPO process. Thus far (pre-IPO), the company's results have matched or beaten expectations, and we believe Mr. Miller has a good handle on how to communicate with the Street. Both Mr. Jin and Mr. Miller believe execution is key.

#### H.P. Jin, President, Chief Executive Officer, and Chairman of the BOD

H.P. Jin is a cofounder of TeleNav and has served as the president and a member of the board of directors since October 1999. Dr. Jin has also served as TeleNav's chief executive officer and chairman of the board of directors from October 1999 to May 2001 and since December 2001. Prior to TeleNav, Dr. Jin served as a senior strategy consultant at the McKenna Group and as a business and strategy consultant at McKinsey & Company, management consulting firms. Dr. Jin was also previously a technical director at Loral Integrated Navigation Communication Satellite Systems, or LINCSS, a division of Loral Space & Communications, Inc., a GPS service and engineering company. Dr. Jin holds a B.S. and M.S. in Mechanical Engineering from

Harbin Institute of Technology in China and a Ph.D. in Guidance, Navigation, and Control, with a Ph.D. minor in Electrical Engineering, from Stanford University.

#### Douglas Miller, Chief Financial Officer and Treasurer

Douglas Miller has served as TeleNav's chief financial officer since May 2006. From July 2005 to May 2006, Mr. Miller served as vice president and chief financial officer of Longboard, Inc., a privately held provider of telecommunications software. From October 1998 to July 2005, Mr. Miller held various management positions at Synplicity, Inc., a publicly traded electronic design automation company acquired by Synopsys, Inc., including senior vice president of finance and chief financial officer. Prior to that time, Mr. Miller also served as chief financial officer of 3DLabs, Inc., a publicly held graphics semiconductor company, and as a partner at Ernst & Young LLP, a professional services organization. Mr. Miller is a certified public accountant (inactive). He holds a B.S.C. in Accounting from Santa Clara University.

Table 21: TeleNav's Management Team and Board of Directors

Management	Role	Age	Prior Experience
H.P. Jin	President, CEO & Chairman	46	Co-founder, McKenna Group, McKinsey & Co, Loral Space
Douglas Miller	CFO & Treasurer	52	Longboard, Synplicity, 3DLabs, Ernst & Young
Y.C. Chao	VP, Research & Development	45	Co-founder; Snaptrack, Trimble Navigation
Salman Dhanani	VP, Products & Marketing	36	Co-founder; McKenna Group, Schlumberger Ltd
Loren Hillberg	General Counsel & Secretary	51	Force10 Networks, Macrovision, Macromedia
Robert Rennard	Chief Technical Officer	65	Cyberstar, LINCSS/Loral, Stanford Telecom, Newbridge
Hassan Wahla	VP, Business Dev & Carrier Sales	38	Nextel, Wireless Multimedia, MicroStrategy, Maritime Power
BoD	Role	Age	Affiliations
H.P. Jin	Chairman	46	President & CEO
Shawn Carolan	Director	35	Managing Director of Menlo Ventures
Samuel Chen	Director	59	Chairman of Rayson, Sonix, GlobalStat
Hon Jane Chiu	Director	54	Director of Comchip; Chairman of Union Polymer Material; Director of
			Secureinside.com, Taiwan Parking Corp
Soo Boon Koh	Director	59	Managing Partner of iGlobe Partners Fund
Joseph M. Zaelit	Director	64	Venture Partner of iGlobe Partners Fund

Source: Company reports.

## Appendix: Glossary Of Terms

#### Angle of Arrival measurement (AoA)

Angle of Arrival measurement is a method for determining the direction of propagation of a radio-frequency wave incident on an antenna array.

#### Application programming interface (API)

API is a set of routines, data structures, object classes, and/or protocols provided by libraries and/or operating system services in order to support the building of applications. It can be dependent or independent on the operating system.

#### **ARPU**

Average revenue per user typically refers to the monthly revenue associated with a consumer of telecommunications services.

#### Cell Identification/Cell of Origin (COO)

COO is a mobile positioning technique for finding a caller's cell location, based on the base-station segment in which the handset is operating.

#### CPC (Cost per Click)

CPC is cost of advertising based on the number of clicks received.

#### **CPO** (Cost per Order)

CPO is cost of advertising based on the number of orders received. Also called Cost per Transaction.

#### **CPM** (Cost per thousand)

It is media term describing the cost of 1,000 impressions, e.g., a Web site that charges \$1,500 per ad and reports 100,000 visits has a CPM of \$15 (\$1,500 divided by 100).

#### **Eyeballs**

Eyeballs is slang term for audience; the number of people who view a certain website or advertisement.

#### Geo-coding

This process assigns a map position to an address record.

#### **Geo-location**

It is the identification of the real-world geographic location of an Internet-connected computer, or GPS-enabled mobile device.

#### **Geo-tagging**

It is the process of adding geographical data (usually latitude and longitude coordinates) to various media such as photographs, video, websites, or RSS feeds. These data can also include altitude, bearing, accuracy data, and place names.

#### **Geo-targeting**

Displaying (or preventing the display of) content based on automated or assumed knowledge of an end user's position in the real world. This is relevant to both PC and mobile data services.

#### GIS

A geographic information system (GIS) captures, stores, analyzes, manages, and presents data that refers to or is linked to location.

#### **GSM Localization**

It is the use of multilateration to determine the location of GSM mobile phones, usually with the intent to locate the user.

#### **GUI**

Graphical User Interface is the software interface between user and hardware of any electronic device. A GUI offers graphical icons, and visual indicators, as opposed to text-based interfaces, typed command labels, or text navigation to fully represent the information and actions available to a user.

#### **GEOINT**

GEOINT stands for GEOspatial INTelligence, which is an intelligence discipline comprising the exploitation and analysis of satellite information to describe, assess, and visually depict physical features and geographically referenced activities on the Earth.

#### **GPS**

GPS is Global Positioning System which is a technology that gives the position of any object with attached GPS receiver on the globe. It uses four satellites from a constellation of 24 to 32 satellites (launched by the U.S.) to precisely locate the GPS receiver. The official name of GPS is NAVSTAR (Navigation Satellite Timing and Ranging).

#### **LBS**

A location-based service (LBS) is an information and entertainment service, accessible with mobile devices through the mobile network and utilizing the ability to make use of the geographical position of the mobile device. LBS can include mobile commerce when taking the form of coupons or advertising directed at customers based on their current location. They include personalized weather services and even location-based games.

#### **LBA**

Location-based advertising relates to ad revenues that originate in knowing the location of the consumer and using that information to provide context-sensitive promotions, coupons, or other material that drives business to the advertiser.

#### MEO

Medium Earth Orbit (MEO) is the region of space around the Earth above Low Earth Orbit (altitude of 2,000 kms) and below geostationary orbit (altitude of 35,786 kms). The most common use for satellites in this region is for navigation, such as GPS (with an altitude of 20,200 kms).

#### **MRM**

Mobile Resource Management refers to a suite of software and services for use by business customers for management mobile workers, mobile assets, and mobile tasks.

#### NGA

National Geospatial Intelligence Agency (NGA) is an agency of the U.S. Government with the primary mission of collection, analysis, and distribution of geospatial intelligence (GEOINT) in support of national security.

#### **OEM**

Original equipment manufacturer.

#### **Off-Board Navigation**

Map data is stored on a server and downloaded to the handset as and when required.

#### **On-Board Navigation**

Map data is stored in the handheld device itself.

#### Points of Interest (POI)

Additional information included in maps such as information about gas stations, restaurants, hotels, etc. In some instances, additional POIs can be downloaded and included in the map data, such as speed cameras, McDonalds locations, and other sponsored information.

#### **PND**

Portable Navigation Device (PND) is a portable electronic product which combines a positioning capability (such as GPS) and navigation functions.

#### **PSAP**

A Public Safety Answering Point (PSAP) is a call center responsible for answering calls to an emergency telephone number for police, firefighting, and ambulance services.

#### SIS

Spatial Information Systems (SIS) is the technology of acquiring, managing, analyzing, and displaying information in a spatial context. GIS software, GPS, and remotely sensed data from aircraft and satellites are all examples of this technology in spatial data.

#### SMB/SME

Small to medium-sized business/Small to medium-sized enterprise.

#### **SMS**

Short message service, otherwise known as 'texting'.

#### Spam

Spam is unsolicited commercial e-mail.

#### TBT

Turn-by-turn navigation refers to computer-aided navigation in which driving and walking instructions are issued via voice or a visual display interface.

#### **US E911 Mandate**

US's E911 program mandates cell phones to transmit their phone number and location when dialing 911. Many new phones have GPS receivers built in, even if they can't provide turn-by-turn directions.

Table 22: Income Statement

	FY08A	FY09A	1Q10A	2Q10A	3Q10A	4Q10E	FY10E	1Q11E	2Q11E	3Q11E	4Q11E	FY11E	FY12E
m . 10	40.4	110.0	26.0	40.5	45.1	46.0	160.6	40.4	70.0			210.1	261.5
Total Revenue	48.1	110.9	36.0	40.5	45.1	46.9	168.6	49.4	50.0	<b>53.5</b> 8.3%	57.2 6.8%	210.1	261.5
% Growth (q/q) % Growth (y/y)	73.4%	130.7%	5.2% 67.5%	12.4% 60.4%	25.1% 51.1%	4.1% 37.1%	52.1%	5.3% 37.1%	1.2% 23.5%	8.5% 18.7%	21.8%	24.6%	24.4%
Cost of revenue	11.4	20.3	7.1	6.9	7.2	8.9	30.1	9,9	11.0	12.3	13.5	46.7	67.1
	11.4	20.3	9.1%	-2.5%	4.1%		30.1		11.0	11.8%	9.6%	40.7	07.1
% Growth (q/q)	47.207	78.3%	9.1% 75.7%	-2.3% 54.7%	4.1% 35.4%	24.4% 37.7%	48.4%	10.8% 39.8%	59.7%	71.6%	9.0% 51.3%	55 AO/	43.7%
% Growth (y/y) % of Sales	47.2% 23.6%	78.3% 18.3%	73.7% 19.6%	34.7% 17.0%	35.4% 15.9%	19.0%	48.4% 17.8%	39.8% 20.0%	22.0%	23.0%	23.6%	55.4% 22.2%	45.7% 25.7%
Gross profit	36.7	90.6	29.0%	33.6	37.9	38.0	138.6	39.5	39.0	41.2	43.7	163.4	194.4
Gross Margin	76.4%	81.7%	80.4%	83.0%	84.1%	81.0%	82.2%	80.0%	78.0%	77.0%	76.4%	77.8%	74.3%
· · · · · · · · · · · · · · · · · · ·	70.470	01.770	80.470	03.070	04.170	01.070	02.270	00.070	70.070	77.070	70.470	77.070	74.370
Operating expenses:	10.7	22.5	7.0	0.4	10.0	10.0	40.0	12.4	12.0	14.4	15.0	56.6	66.1
Research and development	13.7	23.5	7.9	9.4	10.9	12.0	40.2	13.4	13.8	14.4	15.0	56.6	66.1
% Growth (q/q)			9.5%	18.7%	16.6%	9.5%		12.0%	3.0%	4.0%	4.0%		
Sales and marketing	13.2	16.5	3.9	4.1	4.5	5.3	17.8	6.0	6.3	6.4	6.8	25.5	30.0
% Growth $(q/q)$			-13.1%	4.7%	9.2%	19.0%		13.0%	4.0%	3.0%	5.0%		
General and administrative	5.0	8.3	2.6	3.1	3.5	4.0	13.2	4.2	4.4	4.6	5.0	18.3	21.9
% Growth $(q/q)$			6.0%	21.3%	12.2%	16.0%		5.0%	4.5%	4.0%	8.0%		
Total operating expenses	31.9	48.3	14.4	16.6	18.9	21.4	71.2	23.7	24.5	25.4	26.7	100.4	118.0
% of Sales	66.4%	43.6%	39.9%	41.0%	41.9%	45.5%	42.3%	47.9%	49.0%	47.5%	46.7%	47.8%	45.1%
Operating income (loss)	4.8	42.3	14.6	17.0	19.0	16.7	67.3	15.8	14.5	15.8	17.0	63.1	76.4
Operating Margin	9.9%	38.1%	40.5%	42.0%	42.2%	35.5%	39.9%	32.1%	29.0%	29.5%	29.7%	30.0%	29.2%
Stock-based compensation	0.5	0.5	0.3	0.6	0.9	3.5	5.2	1.1	1.3	1.3	1.4	5.1	6.5
PF EBITDA	6.7	45.2	15.9	18.8	21.2	21.5	77.4	18.4	17.4	18.7	20.3	74.7	96.2
EBITDA Margin	14.0%	40.7%	44.2%	46.4%	46.9%	45.8%	45.9%	37.2%	34.8%	34.9%	35.5%	35.6%	36.8%
Interest income				0.0									
Other income (expense), net	0.0	(0.9)	(0.5)	0.2	(0.0)	(0.0)	(0.4)	0.1	0.1	0.1	0.1	0.2	0.2
GAAP Income (loss) before taxes	4.8	41.4	14.1	17.2	19.0	16.7	66.9	15.9	14.5	15.8	17.0	63.3	76.6
Provision for income taxes	0.2	11.9	6.0	7.1	6.5	6.7	26.2	6.7	6.1	6.6	7.2	26.6	31.4
tax rate (%)	3.9%	28.7%	42.3%	41.2%	34.0%	40.0%	39.1%	42.0%	42.0%	42.0%	42.0%	42.0%	41.0%
PF Income (loss) before taxes	5.2	42.0	14.4	17.8	19.9	20.1	72.2	17.0	15.8	17.2	18.5	68.4	83.1
Provision for income taxes	0.2	12.0	6.1	7.3	6.8	8.5	28.6	7.1	6.6	7.2	7.8	28.7	34.1
tax rate (%)	3.9%	28.7%	42.3%	41.2%	34.0%	42.0%	39.7%	42.0%	42.0%	42.0%	42.0%	42.0%	41.0%
GAAP Net Income	4.6	29.5	8.1	10.1	12.5	10.0	40.8	9.2	8.4	9.2	9.9	36.7	45.2
GAAP Net Margin	9.6%	26.6%	22.5%	25.0%	27.8%	21.3%	24.2%	18.7%	16.9%	17.1%	17.3%	17.5%	17.3%
PF Net Income	5.1	30.0	8.3	10.5	13.1	11.7	43.6	9.8	9.2	10.0	10.7	39.7	49.1
Net Margin	10.5%	27.0%	23.0%	25.9%	29.0%	24.9%	25.8%	19.9%	18.3%	18.6%	18.7%	18.9%	18.8%
GAAP EPS - Diluted	\$0.16	\$1.02	\$0.22	\$0.27	\$0.33	\$0.24	\$1.05	\$0.20	\$0.18	\$0.20	\$0.21	\$0.79	\$0.96
PF EPS - Diluted	\$0.18	\$1.04	\$0.22	\$0.28	\$0.34	\$0.28	\$1.12	\$0.21	\$0.20	\$0.21	\$0.23	\$0.86	\$1.04
Diluted shares outstanding	28.833	28.833	37.521	38.001	38.028	42.300	38.962	46.000	46.200	46.400	46.600	46.300	47.185

Table 23: Balance Sheet

\$ in millions	FY08A	FY09A	1Q10A	2Q10A	3Q10A	4Q10E	FY10E	1Q11E	2Q11E	3Q11E	4Q11E	FY11E	FY12E
	F 1 00/A	FIOA	IQIOA	2Q10A	SQIOA	4Q10E	FIIOE	IQIL	2Q11E	SQTIE	4Q11E	FIIIE	FIIZE
ASSETS													
Current assets:													
Cash and cash equivalents	16.8	33.1	44.0	50.4	46.1	115.0	115.0	121.1	131.1	139.2	148.8	148.8	197.5
Restricted cash	0.1	_	-	-	-	_	_	_	_	_	_	_	_
Accounts receivable, net	14.6	23.9	23.8	24.9	38.6	33.4	33.4	37.9	38.4	41.1	43.9	43.9	53.6
Inventories	0.0	0.0	0.0	-	-	0.1	0.1	0.0	_	_	0.1	0.1	0.1
Deferred tax asset, current	-	2.1	1.5	1.5	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
Prepaid expenses and other current assets	0.6	2.8	1.7	2.9	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4
Total current assets	32.1	62.0	71.1	79.7	92.0	155.8	155.8	166.4	176.8	187.6	200.1	200.1	258.6
Long term assets:													
Property and equipment, net	2.9	6.6	8.2	8.4	9.5	11.6	11.6	12.1	12.3	13.2	13.2	13.2	11.3
Deferred tax asset, long-term	-	0.4	0.4	-	-	-	-	-	-	-	-	-	-
Deposits and other assets	1.1	3.2	5.3	7.4	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6
Total assets	36.0	72.2	85.0	95.5	110.1	176.0	176.0	187.1	197.8	209.4	221.9	221.9	278.4
LIABILITIES & SHAREHOLDER'S EQUITY													
Current liabilities:													
Accounts payable	1.2	2.1	1.9	1.5	2.8	4.4	4.4	4.3	4.8	5.4	5.9	5.9	8.2
Accrued compensation	2.1	3.8	3.3	4.7	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
Accrued royalties	1.9	3.3	3.3	3.1	2.3	2.7	2.7	3.0	3.2	3.4	3.6	3.6	4.5
Other accrued expenses	1.8	1.9	3.5	3.3	3.1	4.9	4.9	5.4	5.7	6.1	6.5	6.5	8.1
Income taxes payable	-	_	2.7	-	-	_	_	_	_	_	_	_	_
Deferred revenue	2.4	3.5	3.9	4.5	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3
Warrant liabilities, current	-	-	3.1	-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total current liabilities	9.4	14.6	21.7	17.1	17.5	21.2	21.2	22.0	23.0	24.1	25.3	25.3	30.1
Convertible preferred stock	50.2	51.4	51.7	55.7	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0	56.0
Other non-current liabilities	2.2	2.9	1.1	1.5	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
Total Liabilities	61.8	68.8	74.4	74.2	75.8	79.6	79.6	80.4	81.4	82.5	83.6	83.6	88.5
Stockholders' equity:													
Common stock	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Retained earnings	(28.9)	(0.5)	7.3	16.1	28.3	41.8	41.8	52.1	61.8	72.3	83.6	83.6	135.3
Additional paid in capital	2.8	3.4	2.8	4.8	5.5	54.3	54.3	54.3	54.3	54.3	54.3	54.3	54.3
Accumulated other comprehensive income (loss)	0.2	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Total stockholders' equity	(25.8)	3.4	10.6	21.3	34.2	96.4	96.4	106.7	116.4	126.9	138.2	138.2	190.0
Total liab. & equity	36.0	72.2	85.0	95.5	110.1	176.0	176.0	187.1	197.8	209.4	221.9	221.9	278.4

Table 24: Cash Flow Statement

	FY08A	FY09A	1Q10A	2Q10A	3Q10A	4Q10E	FY10E	1Q11E	2Q11E	3Q11E	4Q11E	FY11E	
let Income (loss)	4.6	29.5	8.1	10.1	12.5	10.0	40.8	9.2	8.4	9.2	9.9	36.7	
let cash provided by operating activities:													
Depreciation and amortization	1.5	2.4	1.0	1.2	1.3	1.3	4.8	1.5	1.6	1.6	1.9	6.5	
tock-based compensation	0.5	0.5	0.3	0.5	0.6	3.5	4.9	1.1	1.3	1.3	1.4	5.1	
evaluation of preferred stock warrants	0.7	0.8	0.5	(0.4)	0.6		0.7					-	
hanges in assets and liabilities:													
Accounts receivable	(10.8)	(9.4)	0.2	(0.2)	(14.6)	5.1	(9.5)	(4.5)	(0.5)	(2.7)	(2.8)	(10.4)	)
Deferred tax asset	-	(2.5)	0.5	(0.5)	0.8	-	0.8	-	_	_	-	-	
Prepaid expenses and other current assets	0.0	(2.2)	1.1	(1.1)	(2.7)	-	(2.7)	-	-	_	_	-	
Other assets	(0.1)	(0.1)	(1.1)	2.1	(4.0)	(0.1)	(3.0)	0.0	0.0	_	(0.1)	(0.0)	
Accounts payable	0.3	0.5	(0.3)	0.3	(0.0)	1.6	1.5	(0.1)	0.5	0.6	0.5	1.5	
Accrued compensation	1.2	1.7	(0.5)	0.5	0.2	-	0.2	-	_	_	-	-	
Accrued royalties	0.9	1.4	(0.0)	0.0	(1.0)	0.4	(0.6)	0.3	0.2	0.2	0.2	0.9	
Accrued expenses and other	(0.1)	0.1	2.3	(2.3)	2.4	1.8	4.3	0.5	0.3	0.4	0.4	1.6	
Income taxes payable	0.2	(0.2)	2.7	(2.7)	0.0	-	0.0	-	-	-	-	-	
Deferred revenue	0.9	1.1	0.5	(0.5)	2.0	-	2.0	-	-	_	_	-	
NET CASH PROVIDED BY OPERATING ACTIVITIES	(0.3)	23.8	15.4	7.1	(2.0)	23.6	44.2	8.1	11.9	10.5	11.4	42.0	
apital expenditures	(1.7)	(7.8)	(3.7)	(1.9)	(1.8)	(3.5)	(10.9)	(2.0)	(1.9)	(2.4)	(1.8)	(8.1)	
NET CASH USED IN INVESTING ACTIVITIES	(1.7)	(7.8)	(3.7)	(1.9)	(1.8)	(3.5)	(10.9)	(2.0)	(1.9)	(2.4)	(1.8)	(8.1)	4
	0.0			0.0	(0.0)		0.0						
roceeds from exercise of Series E preferred stock warrants	0.0	-	- 0.2	0.9	(0.0)		0.9					-	
roceeds from exercise of stock options	0.0	0.2	0.3	0.1	0.0		0.4					-	
oceeds from (Repurchase of) common stock	- (0.2)	-	(1.2)	-	- (0.5)	48.7	47.5	-	-	-	-	-	
ettlement of stock options	(0.2)	-	- (0.0)	0.2	(0.5)	40.5	(0.2)					-	
ET CASH PROVIDED BY FINANCING ACTIVITIES	(0.0)	0.2	(0.9)	1.2	(0.4)	48.7	48.6	-	-	-	-	-	╀
ffect of exchange rate on cash hange in cash and cash equivalents	0.2 ( <b>1.9</b> )	0.2 <b>16.3</b>	(0.0) <b>10.9</b>	(0.0) <b>6.4</b>	(0.0) (4.3)	68.9	(0.1) <b>81.8</b>	6.2	10.0	8.1	9.6	33.9	+

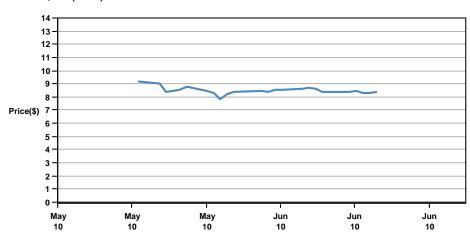
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#### TeleNav, Inc. (TNAV) Price Chart



Source: Bloomberg and J.P. Morgan; price data adjusted for stock splits and dividends.

This chart shows J.P. Morgan's continuing coverage of this stock; the current analyst may or may not have covered it over the entire period.

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	Overweight	Neutral	Underweight
	(buy)	(hold)	(sell)
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IB clients*	48%	46%	32%
JPMSI Equity Research Coverage	42%	49%	10%
IB clients*	70%	58%	48%

<sup>\*</sup>Percentage of investment banking clients in each rating category.

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