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**SSFT RATING:****Buy****Company Summary**

•**We anticipate ScanSoft's revenues growing from \$135MM in 2003 to just over \$800MM in 2014.** Short-term growth will be fueled by leading market share in speech and character recognition applications, and long-term growth by both embedded and network speech.

•**The speech software industry is at an inflection point.** After years of heavy investing in R&D things are starting to pick up. The increased focus on outsourcing and cost savings (especially in hospitals) will lead to increased primary demand for speech software.

•**Microsoft will be a catalyst for near term growth.** Microsoft recently launched (in partnership with ScanSoft) MS Speech Server and announced an increased R&D investment in speech technologies. We believe this will fuel short term revenues and help gain widespread recognition for the industry.

•**Comparables analysis indicates that ScanSoft is undervalued.** Looking at an average of packaged software and speech companies and comparing P/E and P/S ratios, ScanSoft appears undervalued relative to its peers by at least 20%.

•**We are initiating coverage with a Buy and a target price of \$8.00.** Our DCF model shows 76% upside using conservative estimates.

•**Additional upside exists considering that we project no new product launches for the next 10 years.** Given that we project over \$1B cumulative R&D investment by 2014, this is an extremely conservative assumption..

ScanSoft, Inc :  
SSFT Price: 5.53

**SSFT:**

52 week Lo: 3.32  
52 week Hi: 6.55  
Market Cap: \$577.51MM  
2003 Revenues: \$135.4M  
2003 EPS: \$0.13  
2004 Projected EPS: \$0.22  
P/E (2004 est): 22.48  
Profit Margin: 13.1%  
ROA: -1.9%  
ROE: -2.68%  
Beta: 4.421



## **Company Overview** (from 10-K where referenced)

“ScanSoft is a leading provider of software that allows users to incorporate speech, images, and documents in digital applications, systems and devices. Its products and technologies automate manual processes and help enterprises, professionals and consumers increase productivity, reduce costs and save time. Its products are built upon speech and digital capture technologies, and are sold as solutions into the financial, legal, healthcare, government, telecommunications and automotive industries. Its speech technologies enable voice-activated services over a telephone, transform speech into text and text into speech, and permit voice control of devices and applications. Its digital capture technologies transform text, images and files into various digital formats. It focuses on markets where it can exercise market leadership, where significant barriers to entry exist and where it possesses competitive advantages, because of the strength of its technologies, products, services, channels and business processes.”<sup>1</sup>

“ScanSoft’s software is delivered as independent applications or as part of larger integrated systems, such as systems for customer service call centers, navigation systems in automobiles or digital copiers on a network. Its speech solutions enable seamless interaction with hardware and software systems simply by speaking, automatically create documents from speech, and transform text into synthesized speech. Its digital capture solutions eliminate the need to manually reproduce documents, automate the integration of documents into business systems, and enable the use of electronic documents and forms within XML, Internet, mobile and other business applications.”<sup>2</sup>

“Its speech technology has industry-leading recognition accuracy, provides recognition for 48 languages and natural sounding synthesized speech in 22 languages, and supports a broad range of hardware platforms and operating systems. Its digital capture technology is recognized as the most accurate in the industry, with rates as high as 99.8%, and supports more than 100 languages. Its technologies are covered by more than 700 patents or patent applications.”<sup>3</sup>

“Its network-based speech recognition solutions allow users to direct their own calls, obtain information and conduct transactions by simply speaking naturally over any telephone.”<sup>4</sup>

### **Embedded Speech: Vocon, ASR-1600**

When a person speaks to a consumer electronic device, the device understands and responds. Examples include cell phones (call Ari) and automobiles (talk to GPS).

### **Network Speech: RealSpeak and Speechify**

#### **Synthesized speech, call center GPS (talking), blind,**

- Industry-leading synthesized speech solution
- Converts text into speech in 22 languages
- Acquired core assets in the SpeechWorks acquisition

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<sup>1</sup> ScanSoft 10-K

<sup>2</sup> *ibid.*

<sup>3</sup> *ibid.*

<sup>4</sup> *ibid.*

Network Speech includes automated customer service, corporate directories, telephone banking, and other telephone or internet based speech-oriented services. For this segment the company targets Fortune 1000 customers in the telecommunications, financial services, government, and healthcare verticals. Key customers include Mastercard, USPS, and Verizon.

**Dictation:** Dragon Naturally Speaking and IBM Via Voice

ScanSoft's Dragon Naturally Speaking is the market leader for dictation products, with a 65% share. They also have exclusive reseller rights for IBM's ViaVoice, another dictation product positioned on the low end for average consumers. Combined these two products represent a dominant (90%+) share in the dictation market. The Dragon product is typically targeted at professionals such as doctors and lawyers, and is sometimes sold to larger organizations such as hospitals.

These products allow users to automatically convert speech into text at up to 160 words-per-minute, much faster than most people can type. The software supports a vocabulary of more than 250,000 words that can be expanded by users to include specialized words and phrases. It is designed to adapt to individual voice patterns and accents and is highly accurate, able to achieve accuracy rates of approximately 95%, with the ability to achieve still greater accuracy with frequent use. It supports multiple languages, including Dutch, French, German, Italian, Japanese, Spanish, Swedish, and U.S./U.K. English.

- Highly accurate automatic speech recognition available in 8 languages
- Converts speech into text at up to 160 words per minute
- Recognizes more than 250,000 words
- Speech-enables Microsoft Windows applications
- Vertical implementations for medical, legal and public safety markets
- Performs complex tasks simply by speaking

**Document and PDF Conversion:** "OmniPage and PDF Converter

"Based on optical character recognition ("OCR"), our software delivers highly accurate document and PDF conversion, replacing the need to manually re-create documents. Our software preserves document formatting and provides editing capabilities that re-create the complex components in a typical document, including formatted text, columns, graphics, tables and spreadsheets. Our products can be used with existing business applications and enable the distribution and publishing of documents to email, Internet and mobile applications using standard file formats, including XML, HTML, PDF and Open eBook."<sup>5</sup>

**OmniPage**

- 80% market share
- Sold to capture vendors like Captiva, scanner manufacturers like Xerox, and directly to consumers.
- Converts paper and PDF into documents that can be edited, archived and shared
- Accuracy of up to 99.8%, the highest in the industry
- Converts into XML, HTML, Open eBook, Microsoft Word, Excel and PowerPoint

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<sup>5</sup> ScanSoft 10-K

### PDF Converter

- Converts PDF documents and files into editable Microsoft Word (and potentially Excel) documents
- First widely commercial available product of its kind – launched in Q3 2003
- Developed and marketed through relationship with Microsoft<sup>6</sup>

### Digital Paper Management: PaperPort

PaperPort allows for file sharing in an easy format. Specifically, the product allows you to

For example, this can allow you to view a file without launching the application. In addition, the software allows you to convert Word, Excel, Internet pages, or other content into a PDF. In addition, the software has a great phrase lookup that allows you to type in a phrase that you know you wrote, but have no idea where it exists on the computer. The program will scan all files including Word and PDF files for the text<sup>7</sup>.

### Company Evolution:

ScanSoft started as a digital imaging software provider with OmniPage 1.0, right around the time that consumer scanners first hit the retail market. It sold its software directly to scanner manufacturers, and eventually to consumers (bundled with scanners) in retail stores. It grew its business as scanners became more mainstream, and eventually began to expand its products to include additional functionality. ScanSoft then entered the speech industry by chance.

The roots of ScanSoft's business really trace back to the first days the industry began. Since the late 1980's significant time and ongoing investment dollars have flowed into the text-to-speech and speech-to-text arena. The speech recognition market started with a company called Dragon Systems, which developed the first "Naturally Speaking" dictation product. This was closely followed by IBM's Via Voice. Eventually Dragon Systems was acquired by Lernout & Hauspie, a billion dollar firm that went bankrupt due to fraud concerns (ala Enron). ScanSoft – seeing similarities in the business model and distribution strategy for this software- acquired L&H's speech assets for a minimal cost. Considering the substantial R&D investment made by both L&H and Dragon, this was really a bargain acquisition for ScanSoft.

At this point ScanSoft went down two parallel paths: it improved its own speech software organically, and continued to grow by acquisition. Among other strategic moves it acquired all the speech assets of Phillips Electronics IN January 2003 (focused on embedded speech), and merged with SpeechWorks, the leading provider of network speech software and services, in August of 2003.

### Competition

ScanSoft has a strong market position in each of their product categories and is the market leader in document and PDF conversion, network-based speech recognition, and text-to-speech, and dictation. The industry was intensely competitive in its early years, with players such as L&H, Phillips, Speechworks, Nuance, and IBM. As the industry has grown and matured, it has

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<sup>6</sup> Quoted directly from: [http://www.edgar-online.com/bin/cobrand/finSys\\_main.asp?nad=&formfilename=0000950135-04-001306&x=20&y=6](http://www.edgar-online.com/bin/cobrand/finSys_main.asp?nad=&formfilename=0000950135-04-001306&x=20&y=6)

<sup>7</sup> <http://www.scansoft.com/paperport/pro/features.asp>

rapidly consolidated and this has resulted in reduced competition.<sup>8</sup> This consolidation has allowed ScanSoft to emerge as the dominant player and has provided technological advantages by combining the best of a number of different products under one company. Their dominance is such that even IBM, a potential software behemoth, has given ScanSoft exclusive distribution rights to its dictation product, ViaVoice, giving ScanSoft a 90%+ market share in this segment. Being an established leader in this market is an advantage since product buyers tend to go with recognized solutions, in order to minimize selection errors. ScanSoft understands the importance of maintaining this leadership. They have made a strong commitment to developing technologies and new applications, it has broad distribution channels across different industries, and its products handle broad language solutions which makes it more desirable for global vendors.

Currently there is no company that offers that approaches the scope of products provided by ScanSoft. Competition is performed in each of the individual markets:

- **Digital capture:** ABBYY, I.R.I.S. and NewSoft  
These are all private companies with sales between \$1M and \$10M and have recognized solutions in the marketplace.
- **Speech:** AT&T, Fonix, IBM, Nuance Communications and Rhetorical.  
Most direct competition comes from the bigger players such as AT&T and IBM and from Nuance communications (leader with 40 percent of all speech software ports worldwide in 2003).
- **Major Vendors** and possible threats or opportunities: Adobe, Microsoft.

### Microsoft Alliance:

On March 16th, Microsoft announced its entry into the server-based speech recognition market where it is expected to provide speech recognition to the masses. On March 24th, Microsoft announced the launching of Microsoft Speech Server and that it would partner with ScanSoft using its Speechify text-to-speech engine and supporting the ScanSoft OpenSpeech Recognizer engine.

We see this alliance with both optimism and reservation. On the one hand, ScanSoft assures it will be the standard in the speech recognition industry, avoids a competitor such as Microsoft, and protects against large players such as AT&T and IBM. It could also be a potential target for acquisition by Microsoft. On the other hand, it is possible margins could be pressured as ScanSoft becomes more dependent on Microsoft. It would be interesting to understand the details of such alliance in order to estimate how beneficial (or not) it is to ScanSoft. The market seems ambiguous to this alliance.

### Comparison vs. Microsoft

Has Microsoft always won?

Microsoft has entered into competition in many industries, although, despite popular belief, it has not always won. But, they do usually win. In the tax software market, Microsoft Money has been around for years, but has had a difficult time competing with Intuit's products, Quicken, QuickBooks, and TurboTax and hasn't gained significant market share. Microsoft did, at one

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<sup>8</sup> [http://www.edgar-online.com/bin/cobrand/finSys\\_main.asp?nad=&formfilename=0000950135-04-001306&x=20&y=6](http://www.edgar-online.com/bin/cobrand/finSys_main.asp?nad=&formfilename=0000950135-04-001306&x=20&y=6)

time attempt to purchase Intuit for about \$2.3 billion.<sup>9</sup> However, it was blocked by anti-trust authorities. Nonetheless, Intuit has won the war. This is rare enough to warrant a book to have been written about the battle.<sup>10</sup> Intuit is, in many ways, similar to the ScanSoft speech products.

### **Similarities in Intuit and ScanSoft**

The similarities between Intuit and ScanSoft are meaningful and should not be overlooked. These include:

- Both enjoy(ed) substantial leads in consumer usage and dominate(d) the market prior to the entrance of MSFT
- Installed base is substantial
- Both have strong brand recognition among users

However, the differences between Microsoft and Intuit are, perhaps even more significant and in favor of ScanSoft, at least for dictation. ScanSoft owns over 700 patents and their technology has taken years and millions of dollars in investment to produce. One of the critical factors in speech recognition technology is accuracy rates of the converted output. After all, it's annoying to have errors. The ScanSoft accuracy rates have already successfully acted as a strong barrier to entry from competition, including IBM.

For the dictation product, training the program to understand your speech flow takes a significant amount of time. So, there are meaningful switching costs that exist when new software arrives. Why bother training new software, when you have already gone through the process?

We think the largest area of vulnerability comes from the speech software designed for call centers. Call market speech-to-text usage is growing rapidly and ScanSoft does not have the luxury of an enormous installed base. Without the enormous head start, we feel that Microsoft can catch up. In July, 2003, Microsoft launched the first version of computerized speech software designed for call centers.<sup>11</sup> Recently, Microsoft announced a deal with ScanSoft to develop Microsoft Speech Server 2004 using ScanSoft technology. This is slightly perplexing to us as ScanSoft is, in effect, sleeping with the enemy and helping them to establish relationships with firms that Microsoft can leverage in the future if and when their text-to-speech technology improves enough. ScanSoft has no need for additional cash in the short-term, but this deal would help them to dramatically spread the usage of text-to-speech software.

Still, the battle of text-to-speech and speech-to-text products has only just begun. Clearly defining the winner at this stage and evaluating what position ScanSoft will ultimately have is difficult. Since we are only taking a 6-12 month outlook, we have not tried to predict this outcome. We are of the view that in this timeframe, announcements and innovations by Microsoft can only HELP ScanSoft by legitimizing speech and helping it gain widespread adoption. Clearly, in the future, Microsoft could become a threat, but in the near-term, they are only a catalyst for growth in the sector.

### **Revenue**

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<sup>9</sup> [http://cse.stanford.edu/class/cs201/projects-95-96/corporate-monopolies/dangers\\_quicken.html](http://cse.stanford.edu/class/cs201/projects-95-96/corporate-monopolies/dangers_quicken.html)

<sup>10</sup> <http://www.bookfinder.us/review9/1591391369.html>

<sup>11</sup> <http://www.informationweek.com/story/showArticle.jhtml?articleID=12800051>

In its financial statements ScanSoft only splits revenue into two parts: speech and digital imaging. In order to project revenues more accurately, we used publicly available information and various assumptions to break it down further, into six distinct product types. In our model, speech revenue is made up of license revenue from dictation software, and license and services revenue from Network and Embedded Speech. Imaging revenues consist of license revenue from the OmniPage, PaperPort, and PDF Converter.

Dictation Software: This consists of revenue from Dragon Naturally Speaking and IBM Via Voice (which ScanSoft has exclusive reseller rights for). Combined, these two products represent a dominant (90%+) share in the dictation market.<sup>12</sup> This is one of the fastest growing segments for ScanSoft, with a reported 50% quarter over quarter growth in Q3 2003. In order to choose a growth rate for this product line, we looked at year over year growth between 2002 and 2003. In 2002 (prior to the SpeechWorks and Phillips acquisitions) total speech revenues were reported as \$44.1MM, of which we assumed 80% was related to dictation products (ScanSoft did have some network speech revenue prior to SpeechWorks). For 2003, using our estimates for the other two speech product lines (see below) and actual speech revenues of \$77.9MM, we assumed dictation revenues of \$47.3MM. Note this is in line with the baseline run rate of \$13.1MM/quarter prior to the SpeechWorks and Phillips Acquisitions<sup>13</sup> Based on these estimates **dictation revenues grew 27% from 2002 to 2003**, which is rather impressive considering it was a very depressed overall market for packaged software applications.

Using this as a baseline we chose 20% as the projected growth for 2004, and immediately took this number down, reducing it year by year and finally ending at 4% growth in the final year. We feel these estimates are conservative given the higher historical baselines and potential for increased demand as hospitals look for new ways to reduce costs. In fact, we believe there is a distinct possibility that we will see stable to increasing growth for the next 2-3 years, but to keep our model conservative we reduced the growth rate each year. As a reality check, based on the current software ASP (\$700) and our cumulative dictation revenues we estimate that in 2014 955,000 doctors and lawyers will be ScanSoft customers, representing only 55% of the 1.7MM doctors in lawyers in the US today. Obviously this implies there is significant upside potential to our dictation revenue projections.

Network Speech: This is basically the SpeechWorks business, and it includes services and software license revenues from automated customer service, corporate directories, telephone banking, and other telephone or internet based speech-oriented services. To project these revenues we looked at the historical sales growth for SpeechWorks prior to their acquisition by ScanSoft. From 1999 to 2000 growth was 109%, from 2000 to 2001 growth was 47%, and from 2001 to 2002 revenues declined by 16%. This decline was attributable to an overall slowdown in the industry, and consensus projections/company guidance for 2003 were in the \$47MM revenue range, a 30.5% increase over 2002 revenues. In the first two quarters of 2003 SpeechWorks reported \$8.7 and \$11M in revenues, and based on ScanSoft's conference call and analyst comments, this growth continued into the third and fourth quarters. As such, we felt comfortable using \$47MM as our baseline for network speech revenue, and 30.5% as a starting point for revenue growth in this segment. Note that we only assume "actual" network speech revenue for ScanSoft as \$21.8MM in 2003, because this represents only two quarters of SpeechWorks revenue.

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<sup>12</sup> Craig Hallum and Associates

<sup>13</sup> Craig Hallum, 10-7-03

Using the baselines mentioned above, we increased 2004 network speech revenue at 30%. We increased this growth rate by a small margin for 2005 and 2006, and began reducing it year by year, finally ending at 4% growth in 2014. Other than historical baselines, there are two major reasons for strong projected growth in this segment. The first is that as we see more of a backlash against companies that have been outsourcing their customer service and call centers to India and other nations, we feel that those companies will look for alternative ways to get those same cost savings without being subject to that backlash. Network Speech represents an obvious way to capitalize on this trend. The second is Microsoft's recent launch of Speech Server, and its continued focus on this segment, as discussed earlier in the report. We would also note that we performed a sensitivity on these growth figures as they are our most aggressive assumption. But, as the sensitivity shows, even at 75% of our projected growth ScanSoft is still undervalued by 42%.

**Embedded Speech:** This is essentially the speech business acquired from Phillips in January 2003. It includes voice activated systems in cars, cell phones, mobile devices, and other consumer electronics. This segment is very new, and is generally seen as having the greatest long term growth potential (especially in automotive). Analysts' estimates and company guidance put this segment at about 10% of overall revenues in Q4 2003, which we equated to about 6.5% of overall 2003 revenue (about \$8.8MM). This represents only about 60% of the estimated \$15MM in "transferable" revenue from the Phillips acquisition.<sup>14</sup> In fact, because this is such a new segment, we do not model ScanSoft reaching this \$15MM run rate until 2005, a full two years after the acquisition (we model modest 10% growth in 2004). We feel that this is a safe estimate given that many of the embedded deals are structured so revenues are not received until the devices themselves (e.g. cars with talking GPS) are sold. Since we have no historical benchmarks for this revenue segment we based our projections on anecdotal evidence from analysts and industry news. We grew annual embedded speech revenues at 50% in 2006, declining to 30% growth in 2010, and 4% growth in 2014. If this segment does grow as industry analysts suggest, and speech becomes prevalent on all consumer electronics, then these estimates should prove conservative. Since this revenue stream is by far the most unknown, we performed sensitivity on ScanSoft's value **assuming NO revenues from embedded speech**. In this circumstance, we found they were still **undervalued by 50%**.

**OmniPage:** This consists of revenues from ScanSoft's flagship character recognition product, which is embedded in or sold with scanners, and has an estimated 80% market share.<sup>15</sup> Based on information provided by the company and analyst estimates we know that in 2002 this product represented about 10% of total revenues, while PaperPort represented about 35% of total revenues. Since we only modeled three digital imaging products, we used these percentages to calculate the relative mix of those two products within the "residual" (net of PDF converter) imaging revenues. We estimated that in 2003 about 70% of the residual is PaperPort, and 30% is OmniPage. Note that we increased OmniPage's share of the residual by nine basis points to account for the Q4 launch of OmniPage Pro Office 14, the most successful launch in that products history.<sup>16</sup> For 2003 we are given both total imaging revenues (\$47.4MM) and PDF converter revenues (\$4MM<sup>17</sup>), so using these residual percentages we estimate 2003 OmniPage revenues of \$15.9MM.

Before the Q4 launch OmniPage was generally considered a very mature product in the later stages of its lifecycle. This would imply flat to declining growth going out into the future. Despite the success of the launch we have remained conservative in our estimates for OmniPage

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<sup>14</sup> Craig Hallum

<sup>15</sup> Craig Hallum

<sup>16</sup> [http://biz.yahoo.com/bw/040309/95205\\_1.html](http://biz.yahoo.com/bw/040309/95205_1.html)

<sup>17</sup> Company conference call



Growth. We assume 2.5% growth in 2004 (Q1 is likely to see some lingering effects from the Q4 launch), becoming flat in 2009, leading to -5% in 2014. Note that in 2006 we anticipate another strong launch of OmniPage (historically this happened every 2 years) and therefore the declining growth is not linear, as we project 4% growth in this year.

Paper Port: This consists of license revenues from ScanSoft's document sharing and organization product that works in conjunction with the PDF format. We estimated 2003 PaperPort revenues at \$37.5MM using the same method as we did for OmniPage, discussed above. According to the company, this product that product has grown at a rate of 20-25% for four consecutive years, and is fast on its way to becoming an industry leader.<sup>18</sup> To remain conservative we predicted 20% growth in 2004, leading to 17% in 2009 and a constant decline, terminating in -1% growth in 2014.

PDF Converter: This consists of license revenues from ScanSoft's new PDF converter product, which was launched in Q3 2003. On its Q4 earnings conference call the company stated that they received \$4MM in revenue from the PDF converted in 2003, and they expect it will represent about 10% of total digital imaging revenue in 2004. With no historical basis for this product, we used this guidance to project 2004 revenues of about \$6.8MM. In the future, we continued to project PDF converter as a percentage of overall digital imaging revenues, using growth rates as a reality. Considering that the other two digital imaging products have been declining, we projected the percentage of overall digital imaging revenues to increase to about 30% by 2009, and then decline to about 5% in 2014. We chose 2009 as the year to begin the decrease because revenues reach about \$40M in the year. Based on anecdotal evidence from other products we feel this is a logical maximum revenue point for a niche product such as PDF converter.

Note that with such a small percentage of 2014 digital imaging revenue from PDF converter and declining PaperPort and OmniPage revenues, we anticipate total digital imaging revenues will make up only 11% of 2014 revenues, vs. 35% in 2004. This is extremely conservative given the company's history of innovation in this area and their large continuing investment in R&D. In all likelihood they will launch new digital imaging products over the next 10 years which should help to maintain strength in this segment. **However to remain conservative we have not modeled any new speech or digital imaging products.**

## Margins and Expenses

In order to project margins and expenses we combined the historical financials for ScanSoft and SpeechWorks, and used those results in conjunction with company guidance.

Gross Margin: In 2000, 2001, 2002, and 2003 ScanSoft/Speechworks gross margins were 66%, 72%, 77.5%, and 80.7%, respectively. The consistent improvement is a result of reduced professional services revenue as each company's software applications became more "productized." For **2004** the company **guided** to an **80% gross margin** by Q4, however to remain conservative and account for a lower margin in earlier quarters we have **held our projected 2004 gross margin at 79%**. In projecting beyond 2004 to remain conservative we kept the margin at 79% through 2007, and gradually raised it, eventually flattening at 82% for 2014. We feel this is conservative, especially given ScanSoft's push towards productization of some of SpeechWorks previously service-centric offerings (e.g. outsourced call centers).

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<sup>18</sup> Company conference call

**R&D:** In 2000, 2001, 2002, and 2003 ScanSoft/Speechworks R&D as a percentage of sales was 24.6%, 23.2%, 25.1%, and 25.1%, respectively. For 2004 the company **guided to R&D expense at 20% of revenues** by Q4. To remain conservative and account for the higher 24% guidance in Q1 we have **held our percentage to 20.5% for 2004**. In projecting beyond 2004 we reduced the percentage to 20% in 2005, and slowly brought it down to a constant 16% beginning in 2013. Note that these estimates are extremely conservative given that even Microsoft, the leading software company in the world, only spent 14.5% of its 2003 revenues on R&D. In addition, we conducted sensitivity analysis, increasing the R&D percentage by two basis points per year, and we found that even in this scenario ScanSoft is still 63% undervalued.

**SG&A:** In 2000, 2001, 2002, and 2003 ScanSoft/Speechworks SG&A as a percentage of sales was 55%, 53%, 47%, and 46%, respectively. For Q1 2004 the company expects SG&A expense to be 50% of revenues, **going down to 40% in Q4 2004**. To remain conservative and account for the higher Q1 percentage, we have **held our percentage to 43% for FY 2004**. In projecting beyond 2004 we used 43% as a baseline, and raised and lowered this percentage every other year. This fluctuation helps account for the sporadic nature of marketing expenses associated with new product launches. Eventually we have this expense line flattening out at 38% of 2014 revenues. Note that we conducted sensitivity analysis, increasing the SG&A percentage by three basis points per year, and we found that even in this scenario ScanSoft is still 56% undervalued.

**Beta:**

Yahoo has the Beta for ScanSoft as 4.421. We did not feel that this was a realistic beta for the company. As a result, we used the historical beta for the software and programming industry of 1.65. We also performed a sensitivity analysis around the discount rate.

Other software company betas include:

Adobe	1.417
Intuit	1.313
Microsoft	1.585
Macromedia	1.894
Computer Associates	2.379
Network Associates	1.871

ScanSoft (SSFT) Projection Model

	76%	<-----	Historical	Explicit	----->										
			2002A	2003A	2004E	2005E	2006E	2007E	2008E	2009E	2010E	2011E	2012E	2013E	2014E
Income Statement															
ScanSoft Revenues			106,619	135,399											
Speechworks Revenue			36,007												
Total Revenues			142,626	135,399	195,758	247,616	310,145	382,991	462,058	550,823	629,535	694,951	754,432	797,966	812,184
ScanSoft COGS			16,419	26,134											
Speechworks COGS			15,628												
Total COGS			32,047	26,134	41,109	51,999	65,131	80,428	92,412	110,165	119,612	132,041	135,798	143,634	146,193
ScanSoft R&D			27,633	33,953											
Speechworks R&D			15,201												
Total R&D			35,834	33,953	40,130	49,523	62,029	72,768	83,170	93,640	103,873	114,667	124,481	127,674	129,949
ScanSoft SG&A			41,764	62,825											
Speechworks SG&A			41,136												
Total SG&A			66,900	62,825	84,176	111,427	139,565	160,856	203,305	225,837	276,996	284,930	286,684	303,227	308,630
EBITDA			7,845	12,487	30,343	34,666	43,420	68,938	83,170	121,181	129,055	163,313	207,469	223,430	227,411
ScanSoft COGS Amort of Intangibles			9,470	10,516	14,240	18,013	22,561	21,433	20,361	19,343	18,376	17,457	16,585	15,755	14,968
ScanSoft Depr and Amort			3,689	4,740	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000
Total Depreciation & Amortization			21,559	15,256	17,240	21,013	25,561	24,433	23,361	22,343	21,376	20,457	19,585	18,755	17,968
EBIT			(13,714)	(2,769)	13,102	13,654	17,859	44,505	59,809	98,838	107,679	142,856	187,884	204,675	209,444
ScanSoft Interest Income			354	465	426	792	1,004	1,284	1,717	2,230	2,988	3,789	4,836	6,168	7,637
ScanSoft Interest Expense			(369)	(793)	(806)	(776)	(746)	(686)	(626)	(566)	(476)	(386)	(296)	(206)	(116)
Total Net Other income/(expense)			276	675	(380)	16	258	598	1,091	1,664	2,512	3,403	4,540	5,963	7,521
Pretax Income			(13,438)	(2,094)	12,722	13,670	18,117	45,103	60,900	100,502	110,191	146,259	192,425	210,638	216,965
ScanSoft Taxes			(254)	269	0	0	0	0	0	0	0	0	0	0	0
SpeechWorks Taxes			175		(1,272)	(4,784)	(6,341)	(15,786)	(21,315)	(35,176)	(38,567)	(51,191)	(67,349)	(73,723)	(75,938)
Recurring Net Income			(13,517)	(1,825)	11,450	8,885	11,776	29,317	39,585	65,326	71,624	95,069	125,076	136,915	141,027
ScanSoft Extraordinary Items			(1,041)	(3,693)											
Speechworks Extraordinary Items			(8,006)												
Total Extraordinary Items			(9,047)	(3,693)	0	0	0	0	0	0	0	0	0	0	0
Net Income			(22,564)	(5,518)	11,450	8,885	11,776	29,317	39,585	65,326	71,624	95,069	125,076	136,915	141,027
Income before Extras and Intangibles			5,042	11,331	25,690	26,898	34,337	50,750	59,946	84,670	90,000	112,526	141,661	152,670	155,995
EPS, before Extras and Intangibles			0.05	0.12	0.22	0.23	0.29	0.43	0.51	0.71	0.76	0.95	1.20	1.29	1.32
EPS, reported			(0.21)	(0.06)	0.10	0.07	0.10	0.25	0.33	0.55	0.60	0.80	1.06	1.16	1.19
ScanSoft Shares Out			72,796	92,862											
Speechworks Shares Out			32,750												
Total Shares outstanding, millions			105,546	92,862	118,500	118,500	118,500	118,500	118,500	118,500	118,500	118,500	118,500	118,500	118,500
Income Statement Ratios															
Sales Growth			34.7%	-5.1%	44.6%	26.5%	25.3%	23.5%	20.6%	19.2%	14.3%	10.4%	8.6%	5.8%	1.8%
Gross Margin			77.5%	80.7%	79.0%	79.0%	79.0%	79.0%	80.0%	80.0%	81.0%	81.0%	82.0%	82.0%	82.0%
EBITDA Margin (Operating Margin)			5.5%	9.2%	15.5%	14.0%	14.0%	18.0%	18.0%	22.0%	20.5%	23.5%	27.5%	28.0%	28.0%
EBIT Margin			-9.6%	-2.0%	6.7%	5.5%	5.8%	11.6%	12.9%	17.9%	17.1%	20.6%	24.9%	25.6%	25.8%
Net Margin			-9.5%	-1.3%	5.8%	3.6%	3.8%	7.7%	8.6%	11.9%	11.4%	13.7%	16.6%	17.2%	17.4%
Income before Extras and Intang Margin			3.5%	8.4%	13.1%	10.9%	11.1%	13.3%	13.0%	15.4%	14.3%	16.2%	18.8%	19.1%	19.2%
Tax Rate			-0.6%	12.8%	10.0%	35.0%	35.0%	35.0%	35.0%	35.0%	35.0%	35.0%	35.0%	35.0%	35.0%
Net Income Growth			67.2%	84.4%	-727.4%	-22.4%	32.5%	149.0%	35.0%	65.0%	9.6%	32.7%	31.6%	9.5%	3.0%
EPS growth			204.2%	-155.4%	77.7%	4.7%	27.7%	47.8%	18.1%	41.2%	6.3%	25.0%	25.9%	7.8%	2.2%
R&D as % of Sales			25.1%	25.1%	20.5%	20.0%	20.0%	19.0%	18.0%	17.0%	16.5%	16.5%	16.5%	16.0%	16.0%
SG&A as a % of Sales			47%	46%	43.0%	45.0%	45.0%	42.0%	44.0%	41.0%	44.0%	41.0%	38.0%	38.0%	38.0%
Depr and Amort as a % of Sales			15%	11%	9%	8%	8%	6%	5%	4%	3%	3%	3%	2%	2%

	2002A	2003A	2004E	2005E	2006E	2007E	2008E	2009E	2010E	2011E	2012E	2013E	2014E
<b>Balance Sheet</b>													
Cash and Short-Term Investments		42,584	79,198	100,381	128,374	171,689	222,997	298,815	378,913	483,608	616,849	763,657	916,484
Accounts Receivable, net		42,404	29,498	37,312	46,734	57,711	69,625	83,001	94,861	104,719	113,682	120,241	122,384
Inventory		427	672	850	1,064	1,314	1,510	1,800	1,954	2,157	2,219	2,347	2,389
Prepaid Expenses and Other Current Assets		9,264	9,264	9,264	9,264	9,264	9,264	9,264	9,264	9,264	9,264	9,264	9,264
Notes Recievable, Short-Term		-	-	-	-	-	-	-	-	-	-	-	-
Net PPE		6,977	6,977	6,977	6,977	6,977	6,977	6,977	6,977	6,977	6,977	6,977	6,977
Intangibles, net		54,286	51,438	47,835	43,323	39,037	34,964	31,096	27,420	23,929	20,612	17,461	14,467
Goodwill		243,266	231,874	217,464	199,415	182,268	165,979	150,504	135,803	121,838	108,570	95,966	83,992
Other Long Term Assets, Total		2,732	2,732.0	2,732.0	2,732.0	2,732.0	2,732.0	2,732.0	2,732.0	2,732.0	2,732.0	2,732.0	2,732.0
Equity in unconsolidated affiliate		0	-	-	-	-	-	-	-	-	-	-	-
<b>Total Assets</b>	231,519	401,940	411,652	422,815	437,883	470,992	514,048	584,189	657,925	755,223	880,904	1,018,645	1,158,688
Accounts Payable		7,244	7,007	8,864	11,102	13,709	15,752	18,778	20,388	22,507	23,147	24,483	24,919
Accrued Compensation		7,871	7,871	7,871.0	7,871.0	7,871.0	7,871.0	7,871.0	7,871.0	7,871.0	7,871.0	7,871.0	7,871.0
Accrued Expenses		13,481	13,481	13,481.0	13,481.0	13,481.0	13,481.0	13,481.0	13,481.0	13,481.0	13,481.0	13,481.0	13,481.0
Deferred Revenue		13,672	14,356	15,073	15,827	16,618	17,449	18,322	19,238	20,200	21,210	22,270	23,384
Deferred Payment on Technology License		2,754	1,754	754.0	-	-	-	-	-	-	-	-	-
Other Current Liabilities		4,448	6,431	8,134	10,189	12,582	15,179	18,095	20,681	22,830	24,784	26,214	26,681
Noes Payable - Short Term Debt		904	-	-	-	-	-	-	-	-	-	-	-
Long Term Debt		27,859	26,859	25,859	24,859	22,859	20,859	18,859	15,859	12,859	9,859	6,859	3,859
Deferred Revenue - LT		490	490	490	490	490	490	490	490	490	490	490	490
Deferred Taxes		1,264	-	-	-	-	-	-	-	-	-	-	-
Other Liabilities		18,727	18,727	18,727	18,727	18,727	18,727	18,727	18,727	18,727	18,727	18,727	18,727
Preferred Stock		4,631	4,631.0	4,631	4,631	4,631	4,631	4,631	4,631	4,631	4,631	4,631	4,631
Equity	501,657	453,530	453,530	453,530	453,530	453,530	453,530	453,530	453,530	453,530	453,530	453,530	453,530
Deferred Comp		(1,743)	(1,743)	(1,743)	(1,743)	(1,743)	(1,743)	(1,743)	(1,743)	(1,743)	(1,743)	(1,743)	(1,743)
Accum Other Comp Loss		(748)	(748)	(748)	(748)	(748)	(748)	(748)	(748)	(748)	(748)	(748)	(748)
Retained Earnings		(152,444)	(140,994)	(132,108)	(120,332)	(91,015)	(51,430)	13,896	85,520	180,589	305,665	442,579	583,606
<b>Total Liabilities and Equity</b>	501,657	401,940	411,652	422,815	437,883	470,992	514,048	584,189	657,925	755,223	880,904	1,018,645	1,158,688
Assets=Liabilities+Owner's Equity		-	-	-	-	-	-	-	-	-	-	-	-
<b>BALANCE SHEET RATIOS</b>													
DSO		77.3	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0
Inventory turns		61.2	61.2	61.2	61.2	61.2	61.2	61.2	61.2	61.2	61.2	61.2	61.2
Days COGS in payables		62.2	62.2	62.2	62.2	62.2	62.2	62.2	62.2	62.2	62.2	62.2	62.2
Other Current Assets as % of sales		6.8%	6.8%	6.8%	6.8%	6.8%	6.8%	6.8%	6.8%	6.8%	6.8%	6.8%	6.8%
Other Current Liabilities as % of sales		3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%
Debt Equity Ratio		6.3%	5.9%	5.7%	5.5%	5.0%	4.6%	4.2%	3.5%	2.8%	2.2%	1.5%	0.9%
Debt Total Capital Ratio (ex-excess cash)		6.5%	6.7%	6.8%	7.1%	7.5%	8.3%	10.9%	17.5%	-74.7%	-6.4%	-2.3%	-0.8%
Return on Assets		-1.7%	2.8%	2.1%	2.7%	6.5%	8.0%	11.9%	11.5%	13.5%	15.3%	14.4%	13.0%
Return on Average Equity		-0.4%	2.5%	2.0%	2.6%	6.5%	8.7%	14.4%	15.8%	21.0%	27.6%	30.2%	31.1%

	2002A	2003A	2004E	2005E	2006E	2007E	2008E	2009E	2010E	2011E	2012E	2013E	2014E
<b>Cash flow Statement</b>													
Net income		(5,518)	11,450	8,885	11,776	29,317	39,585	65,326	71,624	95,069	125,076	136,915	141,027
Depreciation & Amortization		15,256	17,240	21,013	25,561	24,433	23,361	22,343	21,376	20,457	19,585	18,755	17,968
Other Non-Cash Items		1,768	-	-	-	-	-	-	-	-	-	-	-
Increase (decrease) in deferred taxes		-	(1,264)	-	-	-	-	-	-	-	-	-	-
Decrease (increase) in working capital		(6,311)	14,091	(4,714)	(5,345)	(5,435)	(6,639)	(6,851)	(6,903)	(4,831)	(5,420)	(2,862)	(167)
Minority interest, net of equity income		-	-	-	-	-	-	-	-	-	-	-	-
<b>Cash from operations</b>		5,195	41,518	25,183	31,993	48,316	56,308	80,819	86,097	110,695	139,241	152,808	158,827
Capital Expenditures		(2,898)	(3,000)	(3,000)	(3,000)	(3,000)	(3,000)	(3,000)	(3,000)	(3,000)	(3,000)	(3,000)	(3,000)
Acquisitions		32,568	-	-	-	-	-	-	-	-	-	-	-
Acquired Intangibles		-	-	-	-	-	-	-	-	-	-	-	-
Other Investing Expenses		(5,560)	-	-	-	-	-	-	-	-	-	-	-
<b>Cash From Investing Activities</b>		24,110	(3,000)	(3,000)	(3,000)	(3,000)	(3,000)	(3,000)	(3,000)	(3,000)	(3,000)	(3,000)	(3,000)
<b>Free cash flows after investing</b>		29,305	38,518	22,183	28,993	45,316	53,308	77,819	83,097	107,695	136,241	149,808	155,827
<b>Cash from Financing</b>													
Repay Short Term debt	\$	-	(904)	-	-	-	-	-	-	-	-	-	-
Issue Short Term debt	\$	-	-	-	-	-	-	-	-	-	-	-	-
Repay LT Debt	\$	(10,514)	(1,000)	(1,000)	(1,000)	(2,000)	(2,000)	(2,000)	(3,000)	(3,000)	(3,000)	(3,000)	(3,000)
Issue LT Debt		-	-	-	-	-	-	-	-	-	-	-	-
Increase (decrease) in debt	\$	(10,514)	(1,904)	(1,000)	(1,000)	(2,000)	(2,000)	(2,000)	(3,000)	(3,000)	(3,000)	(3,000)	(3,000)
Equity Issuances, Net	\$	5,395	-	-	-	-	-	-	-	-	-	-	-
Dividends Paid		-	-	-	-	-	-	-	-	-	-	-	-
<b>Net cash provided by Financing</b>		(5,574)	(1,904)	(1,000)	(1,000)	(2,000)	(2,000)	(2,000)	(3,000)	(3,000)	(3,000)	(3,000)	(3,000)
<b>Change in Cash</b>		23,731	36,614	21,183	27,993	43,316	51,308	75,819	80,097	104,695	133,241	146,808	152,827
<b>Reference: Cash Flow Ratios</b>													
Cash from operations / Sales		3.8%	21.2%	10.2%	10.3%	12.6%	12.2%	14.7%	13.7%	15.9%	18.5%	19.1%	19.6%
Available cash after investing / Sales		21.6%	19.7%	9.0%	9.3%	11.8%	11.5%	14.1%	13.2%	15.5%	18.1%	18.8%	19.2%
Cash used in investing / Sales		-17.8%	1.5%	1.2%	1.0%	0.8%	0.6%	0.5%	0.5%	0.4%	0.4%	0.4%	0.4%
Cash / Sales		31.5%	40.5%	40.5%	41.4%	44.8%	48.3%	54.2%	60.2%	69.6%	81.8%	95.7%	112.8%
Cash / Total Assets		10.6%	19.2%	23.7%	29.3%	36.5%	43.4%	51.2%	57.6%	64.0%	70.0%	75.0%	79.1%
<b>CASH FLOW RATIOS</b>													
Capex & Acquisitions to Sales		-21.9%	1.5%	1.2%	1.0%	0.8%	0.6%	0.5%	0.5%	0.4%	0.4%	0.4%	0.4%
Depreciation / Capex & Acquisitions		-51.4%	574.7%	700.4%	852.0%	814.4%	778.7%	744.8%	712.5%	681.9%	652.8%	625.2%	598.9%
Incremental Cash from operations to gross investment*		43.8%	-83.0%	-211.7%	81.6%	193.5%	82.9%	248.8%	53.3%	314.1%	339.0%	231.5%	190.0%
Common Dividends per share		-	-	-	-	-	-	-	-	-	-	-	-
Dividend payout ratio		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

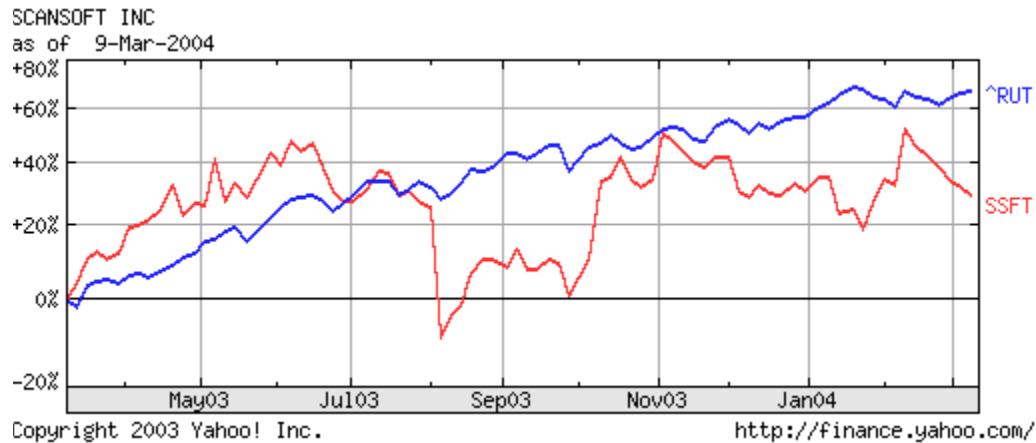
ScanSoft (SSFT) Projection Model  
Revenue Model

76%

76%	Historical		Explicit	----->									
SSFT	2003A	Baseline	2004E	2005E	2006E	2007E	2008E	2009E	2010E	2011E	2012E	2013E	2014E
Packaged Applications													
Dictation Growth			20.0%	19.0%	18.0%	17.0%	15.0%	14.0%	10.0%	7.0%	6.0%	5.0%	4.0%
Dragon Naturally Speaking & IBM ViaVoice	\$ 47,312	\$ 52,400	\$ 56,774	\$ 67,561	\$ 79,722	\$ 93,275	\$ 107,266	\$ 122,284	\$ 134,512	\$ 143,928	\$ 152,564	\$ 160,192	\$ 166,600
OmniPage Growth			2.5%	1.0%	4.0%	2.0%	1.0%	0.0%	-1.0%	0.0%	-1.0%	-3.0%	-5.0%
OmniPage	\$ 15,901	\$ 15,901	\$ 16,298	\$ 16,461	\$ 17,120	\$ 17,462	\$ 17,637	\$ 17,637	\$ 17,460	\$ 17,460	\$ 17,286	\$ 16,767	\$ 15,929
PaperPort Growth			20.0%	17.0%	14.0%	11.0%	8.0%	5.0%	1.0%	-1.0%	-2.0%	-2.0%	-2.0%
PaperPort Revenues	\$ 37,570	\$ 37,570	\$ 45,084	\$ 52,749	\$ 60,133	\$ 66,748	\$ 72,088	\$ 75,692	\$ 76,449	\$ 75,685	\$ 74,171	\$ 72,688	\$ 71,234
PDF Converter % of Digital Imaging Rev			10.0%	18.0%	22.0%	25.0%	27.5%	30.0%	29.0%	25.0%	20.0%	15.0%	5.0%
PDF Converter	\$ 4,000	\$ 4,000	\$ 6,820	\$ 15,192	\$ 21,789	\$ 28,070	\$ 34,033	\$ 39,998	\$ 38,357	\$ 31,048	\$ 22,864	\$ 15,786	\$ 4,588
Total Packaged Apps Rev	\$ 104,783	\$ 109,871	\$ 124,977	\$ 151,964	\$ 178,765	\$ 205,556	\$ 231,025	\$ 255,611	\$ 266,779	\$ 268,122	\$ 266,885	\$ 265,433	\$ 258,350
Network Speech Growth	30.5%		30.0%	32.0%	35.0%	33.0%	28.0%	26.0%	21.0%	17.0%	14.0%	9.0%	4.0%
Network Speech	\$ 21,815	47,000.0	61,100	80,652	108,880	144,811	185,358	233,551	282,596	330,638	376,927	410,850	427,284
Embedded Speech Growth			10.0%	54.9%	50.0%	45.0%	40.0%	35.0%	30.0%	20.0%	15.0%	10.0%	4.0%
Embedded Speech	8,801	15,000	9,681	15,000	22,500	32,625	45,675	61,661	80,160	96,192	110,620	121,682	126,550
Total Revenue	\$ 135,399	\$ 171,871	\$ 195,758	\$ 247,616	\$ 310,145	\$ 382,991	\$ 462,058	\$ 550,823	\$ 629,535	\$ 694,951	\$ 754,432	\$ 797,966	\$ 812,184
Total Speech	\$ 77,928	\$ 114,400	\$ 127,555	\$ 163,213	\$ 211,103	\$ 270,711	\$ 338,299	\$ 417,496	\$ 497,268	\$ 570,757	\$ 640,111	\$ 692,725	\$ 720,433
Total Imaging	\$ 57,471	\$ 57,471	\$ 68,203	\$ 84,402	\$ 99,042	\$ 112,280	\$ 123,758	\$ 133,327	\$ 132,267	\$ 124,193	\$ 114,321	\$ 105,241	\$ 91,750
Total Sales Growth			26.19%	26.49%	25.25%	23.49%	20.64%	19.21%	14.29%	10.39%	8.56%	5.77%	1.78%

<b>ScanSoft (SSFT) Projection Model</b>			Current P/E	25.51
<b>CAPM and Financials</b>			Current Stock Price	\$5.53
			Target Price	\$9.74
CAPM: $R_f + \text{Beta} (R_m - R_f)$				
rf	0.820%	* Yield for 3 month treasury bond (Yahoo Finance - 4/8/04)		
beta	1.65	* Based on Yahoo Beta for comparable companies		
rm	6.320%	* Based on range for market risk premium (can be found in Ivo's book,		
CAPM =	9.895%	= COST OF EQUITY		
<b>Cost of Debt and Return on Invested Cash</b>				
	3.00%	= COST OF DEBT	Rate that the company must borrow at	
	1.00%	= RETURN ON CASH	Return the company will receive from investing cash	
	\$568	= MARKET CAP (MM)	Market Cap of the equity from Yahoo	

## Valuation



Over the past year ScanSoft has provided investors with approximately a 20% return, while the Russell 2000 has returned a little more than 60%. We chose the Russell as a benchmark because with a \$577MM market cap ScanSoft is right near the \$502MM median range for a Russell 2000 company. This weak performance relative to the index was a result one-time charges related to acquisitions, integration risk, and slow-to-negative growth in the digital imaging segment.

In order to assess valuation we performed a DCF analysis, and looked at comparable companies in both packaged software and speech. Based on our revenue and cost projections and the resulting cash flows, the discounted cash flow model shows that **ScanSoft is undervalued by 76%**. Note this assumes a terminal growth rate of 1.78% and WACC of 9.88%.

**ScanSoft (SSFT) Projection Model**  
**WACC and APV**

		2003A	2004E	2005E	2006E	2007E	2008E	2009E	2010E	2011E	2012E	2013E	2014E
EBIT		(2,769)	13,102	13,654	17,859	44,505	59,809	98,838	107,679	142,856	187,884	204,675	209,444
- Corporate tax		-	(1,272)	(4,784)	(6,341)	(15,786)	(21,315)	(35,176)	(38,567)	(51,191)	(67,349)	(73,723)	(75,938)
= EBI		(2,769)	11,830	8,869	11,518	28,719	38,494	63,662	69,112	91,665	120,536	130,952	133,506
+ Depreciation and Amort		15,256	17,240	21,013	25,561	24,433	23,361	22,343	21,376	20,457	19,585	18,755	17,968
+ CAPX		(2,898)	(3,000)	(3,000)	(3,000)	(3,000)	(3,000)	(3,000)	(3,000)	(3,000)	(3,000)	(3,000)	(3,000)
- Change in NWC		(6,311)	14,091	(4,714)	(5,345)	(5,435)	(6,639)	(6,851)	(6,903)	(4,831)	(5,420)	(2,862)	(167)
+ Repayment of Loan		(10,514)	(1,904)	(1,000)	(1,000)	(2,000)	(2,000)	(2,000)	(3,000)	(3,000)	(3,000)	(3,000)	(3,000)
+ Sale price of firm		-	-	-	-	-	-	-	-	-	-	-	-
= (Unlevered) free cash flow		5,386	10,075	30,596	38,424	53,587	63,494	87,857	91,391	110,953	139,540	146,569	1,940,755
<b>APV</b>													
Cost of unlevered equity	0.09895												
Discount factor		0.910	0.828	0.753	0.686	0.624	0.568	0.517	0.470	0.428	0.389	0.354	0.322
PV(cash flow)		4,901	8,342	23,053	26,345	33,433	36,047	45,387	42,961	47,461	54,315	51,914	625,512
PV(all cash flows)	999,671												
Cost of debt	3.00%												
Debt		\$ 27,859	\$ 26,859	\$ 25,859	\$ 24,859	\$ 22,859	\$ 20,859	\$ 18,859	\$ 15,859	\$ 12,859	\$ 9,859	\$ 6,859	\$ 3,859
Interest payment		835.8	805.8	775.8	745.8	685.8	625.8	565.8	475.8	385.8	295.8	205.8	115.8
Tax saving		107.4	80.6	271.5	261.0	240.0	219.0	198.0	166.5	135.0	103.5	72.0	40.5
PV(tax saving)		97.7	66.7	204.6	179.0	149.7	124.3	102.3	78.3	57.8	40.3	25.5	13.1
PV(tax shield)	\$ 1,139												
PV(firm)	\$ 1,000,810												
PV(debt)	\$ 27,859												
PV(equity)	\$ 972,951												
PV(equity)+ PV(debt) imply leverage:	2.78%												
Terminal Value = CF(r-g)	g=												
	r=												
	0.09895												
<b>WACC</b>													
Cost of unlevered equity	0.0990												
Cost of debt	3.00%												
Target leverage ratio D/(D+E)	0.0278												
Target weight on equity	0.9722												
Cost of levered equity	0.1009												
Tax rate	0.1285												
WACC	0.0988												
Discount factor		0.910	0.828	0.754	0.686	0.624	0.568	0.517	0.470	0.428	0.390	0.355	0.323
PV(cash flow)		4,902	8,344	23,060	26,355	33,449	36,068	45,418	42,995	47,503	54,368	51,970	626,245
PV(all cash flows)	1,000,676												
PV(firm)	1,000,676												
PV(debt)	27,859												
PV(equity)	972,817												



## Comparables

It is difficult to find a good comparable for ScanSoft because it is really two companies in one: a packaged applications vendor and enterprise speech software provider. To account for this we looked at two sets of companies. The first were traditional packaged software application vendors such as Intuit, Adobe, and Macromedia. This group of companies is a good comparable because these companies are profitable, have a long track record, and ScanSoft's productivity applications business is almost identical to their business models'. However these comparables are not perfectly suited as ScanSoft's embedded and network speech business (and associated professional services) has different economics. The second set of companies we looked at included speech recognition companies. We chose Nuance, InterVoice and Fonix. These are public companies, which compete directly with ScanSoft in network and embedded speech. Contrasting to the application providers group this one accounts for the different economics of the network and embedded speech businesses. However, these companies are relatively young, unprofitable, and have no packaged application sales. By summing revenues, profits, and market caps for both sets of companies we calculated each individual "industry average" valuation metrics. Then we averaged the comparable ratios between both industries. These are, in our opinion, the best comparables for ScanSoft:

	SSFT		Average	Average	Average	INTU	MACR	ADBE	NUAN	INTV	FNIX.OB
	DCF	Analysts	both	packaged apps	speech apps	packaged 1	packaged 2	packaged 3	speech 1	speech 2	speech 3
<b>2003</b>											
Revenue	\$135,400	\$135,400		\$3,282,405	\$211,252	\$1,850,743	\$336,913	\$1,294,749	\$55,040	\$156,212	\$2,930
Profit	\$11,331	\$11,331		\$610,916	-\$63,447	\$343,000	\$1,572	\$266,344	-\$19,300	-\$44,147	-\$13,530
NI %	8.37%	8.37%		19%	-30%	21%	0%	21%	-35%	-28%	-462%
EPS	\$0.12	\$0.12		\$1.21	(\$0.90)	\$1.74	\$0.02	\$1.12	(\$0.55)	(\$1.25)	(\$0.38)
<b>2004</b>											
Revenue	\$195,758	\$187,380		\$3,753,570	\$244,350	\$1,870,000	\$363,570	\$1,520,000	\$65,500	\$178,850	n/a
Profit	\$25,690	\$23,700		\$720,249	\$9,517	\$324,819	\$39,707	\$355,723	-\$4,563	\$14,080	n/a
NI %	13.12%	12.65%		19.19%	3.89%	17.37%	10.92%	23.40%	-6.97%	7.87%	n/a
EPS	\$0.22	\$0.20		\$1.43	\$0.14	\$1.65	\$0.59	\$1.49	-\$0.13	\$0.40	n/a
<b>Metrics</b>											
EV	\$568,320	\$568,320		\$17,470,000	\$698,000	\$7,640,000	\$1,050,000	\$8,780,000	\$108,740	\$589,260	\$18,330
Sales Growth	27.0%	27.0%		10.4%	15.3%	16.4%	3.7%	11.2%	24.7%	5.8%	404.1%
Price (4/8/04)	\$5.53	\$5.53		\$105	\$24	\$43.80	\$19.54	\$41.99	\$6.14	\$17.42	\$0.31
Market Cap (today)	\$577,498	\$577,498		\$19,962,203	\$828,784	\$8,622,468	\$1,315,042	\$10,024,693	\$215,514	\$613,270	\$15,960
Shares Out (today)	104,430	104,430		502,900	70,300	196,860	67,300	238,740	35,100	35,200	35,200
Shares Out (04)	118,500	118,500		502,900	70,300	196,860	67,300	238,740	35,100	35,200	35,200
EV/E (04)	22.12	23.98	24.26	24.26	n/a	23.52	26.44	24.68	n/a	41.85	n/a
P/E (04)	22.48	24.37	27.72	27.72	n/a	26.55	33.12	28.18	n/a	43.56	n/a
P/S (03)	4.27	4.27	5.00	6.08	3.92	5.22	3.90	7.74	3.92	3.93	5.45
P/S (04)	2.95	3.08	4.35	5.32	3.39	4.61	3.62	6.60	3.29	3.43	n/a

Our analysis shows that ScanSoft's PE based on the low end of 2004 earnings (\$0.20/share) is **24.37**, compared to an "industry" PE of **27.72**. Note that when we look at 2003 or 2004 P/S ratios the company is undervalued by greater than 40%. Also, note that we did not include Fonix into the industry average due to OB stock specificities. However, we can see that the 2003 P/S ratio is substantially larger than Scansoft's.

We also looked to each comparable's growth rate. On average these companies are growing around 10-15%. The most close comparable in terms of growth is Nuance with 24.7%.

If we assume that ScanSoft will reach the industry multiple (27.72), that would give us a price of \$6.01. However, we believe that that ScanSoft's dominant position in productivity applications and strong growth in PDF converter and network speech products necessitates a higher multiple than the industry. In addition, our DCF analysis – even using the most conservative cost and growth assumptions – suggests a price of \$9.74.

<b>2004 EPS</b>	<b>\$0.14</b>	<b>\$0.16</b>	<b>\$0.18</b>	<b>\$0.20</b>	<b>\$0.22</b>	<b>\$0.24</b>
2004 P/E	34.81	30.46	27.07	24.37	22.15	20.31
% undervalued	-22.18%	-6.91%	4.97%	14.47%	22.25%	28.73%

**INDUSTRY AVERAGE 2004 P/E: 27.72**

A brief sensitivity analysis shows that ScanSoft would have to earn \$0.18 /share in 2004 (10% less than the bottom range of guidance, and 20% less than our conservative DCF analysis), in order to justify its current valuation. Based on all these analyses we are initiating coverage with a BUY, and a 12 month price target of \$8.00. We believe this is a conservative estimate with significant upside potential, particularly if the embedded speech segment grows more rapidly than anticipated.

## Sensitivity

The sensitivity page provides a range of valuations depending on changes in product specific revenues, SG&A and R&D costs, WACC, and the terminal growth rate. This is important because in every case ScanSoft is undervalued! Even with no embedded speech revenues, lower network speech revenues, or 20% reduced total revenues, ScanSoft is still undervalued by a good amount. In fact, even with a **discount rate of nearly 12%** and a **perpetuity growth rate of -.2%**, ScanSoft is still **30% undervalued**, assuming they still reach the predicted baseline revenue and cost estimates.

### ScanSoft (SSFT) Projection Model Sensitivity Analysis

50%	2004E	2005E	2006E	2007E	2008E	2009E	2010E	2011E	2012E	2013E	2014E
Base Case Revenues (000)	\$195,758	\$247,616	\$310,145	\$382,991	\$462,058	\$550,823	\$629,535	\$694,951	\$754,432	\$797,966	\$812,184
No Embedded	\$186,077	\$232,616	\$287,645	\$350,366	\$416,383	\$489,162	\$549,376	\$598,759	\$643,812	\$676,283	\$685,634

38%	2004E	2005E	2006E	2007E	2008E	2009E	2010E	2011E	2012E	2013E	2014E
Base Case Revenues (000)	\$195,758	\$247,616	\$310,145	\$382,991	\$462,058	\$550,823	\$629,535	\$694,951	\$754,432	\$797,966	\$812,184
Revenues miss by 20%	\$156,606	\$198,093	\$248,116	\$306,393	\$369,646	\$440,659	\$503,628	\$555,961	\$603,546	\$638,372	\$649,747

114%	2004E	2005E	2006E	2007E	2008E	2009E	2010E	2011E	2012E	2013E	2014E
Base Case Revenues (000)	\$195,758	\$247,616	\$310,145	\$382,991	\$462,058	\$550,823	\$629,535	\$694,951	\$754,432	\$797,966	\$812,184
Revenues increase by 20%	\$234,910	\$297,139	\$372,174	\$459,590	\$554,469	\$660,988	\$755,442	\$833,941	\$905,318	\$957,559	\$974,620

42%	2004E	2005E	2006E	2007E	2008E	2009E	2010E	2011E	2012E	2013E	2014E
Base Case Network Speech Growth	30.00%	32.00%	35.00%	33.00%	28.00%	26.00%	21.00%	17.00%	14.00%	9.00%	4.00%
Reduced Network Speech Growth	22.50%	24.00%	26.25%	24.75%	21.00%	19.50%	15.75%	12.75%	10.50%	6.75%	3.00%

63%	2004E	2005E	2006E	2007E	2008E	2009E	2010E	2011E	2012E	2013E	2014E
Based Case R&D Percentage	20.50%	20.00%	20.00%	19.00%	18.00%	17.00%	16.50%	16.50%	16.50%	16.00%	16.00%
Modified R&D Percentage	22.50%	22.00%	22.00%	21.00%	20.00%	19.00%	18.50%	18.50%	18.50%	18.00%	18.00%

56%	2004E	2005E	2006E	2007E	2008E	2009E	2010E	2011E	2012E	2013E	2014E
Based Case SG&A Percentage	43.00%	45.00%	45.00%	42.00%	44.00%	41.00%	44.00%	41.00%	38.00%	38.00%	38.00%
Modified SG&A Percentage	46.00%	48.00%	48.00%	45.00%	47.00%	44.00%	47.00%	44.00%	41.00%	41.00%	41.00%

#### Current Expected Market Value

		Discount Rate				
Perpetuity Growth Rate	(\$MM)	7.88%	8.88%	9.88%	10.88%	11.88%
	-0.2%	1,067.6	971.9	886.1	809.1	739.9
	0.8%	1,131.2	1,028.8	937.1	854.9	781.0
	1.8%	1,210.4	1,099.7	1,000.7	911.9	832.2
	2.8%	1,311.9	1,190.6	1,082.1	984.9	897.8
	3.8%	1,446.7	1,311.2	1,190.2	1,081.9	984.8

#### % Overvalued or Undervalued

		Discount Rate				
Perpetuity Growth Rate		7.88%	8.88%	9.88%	10.88%	11.88%
	-0.2%	88%	71%	56%	42%	30%
	0.8%	99%	81%	65%	51%	37%
	1.8%	113%	94%	76%	61%	47%
	2.8%	131%	110%	91%	73%	58%
	3.8%	155%	131%	110%	90%	73%

## Catalysts:

In addition to being undervalued according to DCF analysis and comparables, we still believe that for a low volume (average shares traded: 329K) small cap stock like ScanSoft catalysts must exist to drive share price higher. Over the next 6-12 months there are three distinct catalysts which should help drive volume and interest in ScanSoft. These include:

1) **Microsoft:** As was mentioned numerous times in this report, Microsoft has recently announced the first version of its Speech Server product, and has made an announcement that speech is one of its top two R&D priorities for the next five years. Although in the long run Microsoft represents a threat to ScanSoft, in the short term we view this as positive given the likelihood of Microsoft making announcements and putting marketing dollars behind speech initiatives in the next year. This will serve to create buzz and put the spotlight on speech software, a segment where ScanSoft is the clear market leader.

2) **Outsourcing:** The recent trend of outsourcing customer call centers to India and other low-cost labor countries has induced a political backlash which is pushing its way to the mainstream. Using software such as the Network Speech products provided by ScanSoft is a creative way to achieve these costs savings without outsourcing internationally. We view this as a positive for ScanSoft and a sign that demand for network speech is likely to increase in the near term.

3) **Healthcare:** The healthcare sector is focused on cost reduction initiatives in order to offset mounting insurance costs due to over-litigation. We believe that ScanSoft's dictation products are uniquely positioned as "low-hanging fruit" to help hospitals achieve quick and easy savings. This is positive for ScanSoft in that not only are they likely to see increased demand, but higher volume sales such as those to hospitals reduce SG&A costs, resulting in a higher margin sale.

## Risks:

**Microsoft remains the ultimate wildcard.** As discussed above, the position of Microsoft is a risk. In several years, Microsoft may enter into direct competition with ScanSoft, although it is also possible that the patent protection that ScanSoft offers is enough to prevent successful entry. However, given that our investment time horizon is only 6-12 months, we are confident that this is not an issue in the near-term.

**As a manufacturer of software, ScanSoft is at risk of a newer, more effective product being introduced.** We have tried to take this into account when modeling their individual products by limiting their upside after another 5 years, and also by introducing no new products despite substantial investment in R&D.

## Upsides:

**The text-to-speech and speech-to-text are just beginning to grow at a rapid rate,** now that technology has reached a satisfactory level for most users. The ultimate market size is extremely difficult to estimate at such an early stage in adoption, however, it is clear that applications for both products are enormous. This is what draws the interest from Microsoft.

**We have modeled no new products into our future revenues, despite a substantial investment in R&D.** It is highly unlikely that, given ScanSoft's projected over \$1B cumulative spend in R&D between 2004 and 2014, that it will still be selling the same six products at that time. However, to remain conservative, we have not included new products in our estimates. We do believe that these R&D could lead to new products and represent significant upside for ScanSoft.

# Important Disclaimer

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