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The StatCrew Monopoly and Customer Satisfaction

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by

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Statistics in sports have increasingly become such an important factor, yet at the collegiate Division I level all the statistics are generated using an antiquated software called StatCrew. The software unbelievably still uses a DOS platform and is the standard for all sports statistics reporting among Division I level athletic programs in the United States.

The objectives of this study are to: (1) gauge customer satisfaction and trust in the StatCrew brand; (2) to investigate users needs in sports statistics reporting and how the current system should be improved; and (3), to gauge whether or not dissatisfaction is high enough that there is an unexploited market in collegiate statistics software for either a competitor to take advantage of, or for StatCrew to remedy.

A 27-question emaul survey was sent to 345 Division I sports information directors from across the United States and included questions about their perceptions of StatCrew, how it could be improved and their needs in a more robust system that could potentially replace StatCrew. A total of 134 responses were collected, yielding a response rate of 38.8 percent – far above the

target range of 25 percent (86 responses) and 35 percent (120 responses).

In general, the survey found that SIDs are satisfied with the current state of affairs with StatCrew, but acknowledge some things could be changed or improved to comply with technology in the 21st century. The current satisfaction rate among respondents was 52.2 percent.

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CHAPTER ONE

As computing power and human cognition evolve, reliance on statistics as a means of deciphering the world become exponentially more crucial. The statistical revolution has hit just about every industry imaginable, perhaps most lucratively in the sports industry. All sports have relied on stats since their inception; keeping score is a statistic in and of itself. But, again, as human understanding has grown, so too has the means of calculating pertinent statistics relevant to sports. The growth of advanced analytics in all sports and the astronomical popularity of fantasy sports among fans and consumers is a clear indication the importance of statistics in sport.

The best example, of course, is the sport of baseball. Highly popular and organized into leagues in the United States since the 1860s, baseball has been governed by roughly the same rules since its inception, changing only slightly over the last 150 years as technology and fan interest changed exponentially. The same goes for the ancillary things that comprise the sport of baseball, like its statistics. The role of any statistic or analytic is to properly display – with numbers – a story. What is happening on the field? Why – or why aren't – this or that team successful? Numbers have always been adept at this type of theoretical framework for sports writers and teams to gauge success (or lack thereof), but baseball is a peculiar example. Its core statistics – batting average, earned-run average and a slew of others – have been accepted as gospel for more than a century, and with good reason. Why shouldn't one accept that batting average (the percentage a batter gets a hit) is the most important statistic to calculate offensive production? Over the last 50 years, though, there have been those who have asked that very same question in an attempt to truly calculate what makes a person or team successful in baseball. And

their philosophical musings sparked a revolution.

The revolution mentioned, of course, is the now-famous example of what has been coined "Moneyball" – derived from a book of the same name by Michael Lewis written in 2003 (that was later adapted into a motion-picture written by Aaron Sorkin and starring Brad Pitt in 2011). The core concept of Moneyball is that the statistics that have ruled baseball for so long are inefficient at telling the correct story of what happens on the field. Baseball luminaries like Bill James (creator of Stats Inc.) were one of the first in this line of thought (derived, surprisingly, from economic theory of market inefficiency). As computers became more adept at synthesizing large amounts of data (and data become more widely available to the masses), these new metrics (coined "sabermetrics" by James and his disciples), slowly gained popularity and eventually one team took hold of its core concepts and put them into practice: the Oakland Athletics. The A's, a small-market team perennially at the bottom of Major League Baseball's (MLB) revenue list (28^{th} of 30 teams on the most recent Forbes list; Forbes, 2014), had been plagued for decades by home-growing superstars that left for larger contracts with other teams. However, the A's began to use these metrics under the direction of general manager Billy Beane in the late 1990s and early 2000s in earnest to find an inefficiency in the baseball talent market to use to their advantage – and their work paid off large dividends for the next 15 years (Lewis, 2003).

Stats have always been important to teams in terms of scouting and signing talent, but with the example of Moneyball in mind, stats are now lucratively relied upon for success my MLB franchises.

But, what about the ways in which statistics are kept – whether it is baseball or any other sport? These are not easy things to calculate – particularly the advanced metrics now yearned for

in baseball – and it is up to highly advanced software and people skilled enough to commandeer said software.

And what about at the college level, where resources (and revenue) are even more scarce? There is but one company – StatCrew – that owns a virtual monopoly of statistics software over Divison I schools and has for nearly three decades.

StatCrew

Began in Cincinnati in the late 1980s, StatCrew has remained the sole supplier of stats software for Division I sports (football, basketball and baseball among them) since the latter part of that decade and the early 1990s. The software came at the beginnings of the personal computer revolution and the beginnings of common computer and internet literacy.

It's purpose was and still is multifaceted. StatCrew has created nine different programs for 11 sports offered at the Division I level: Baseball/Softball, Basketball, Football, Golf, Ice Hockey, Lacrosse, Soccer/Field Hockey, Tennis and Volleyball (Olympic sports like Track and Field and Swimming and Diving have entirely separate systems of their own). Most of the sports covered employ a DOS interface for in-game scoring, and a basic Windows interface for report generation.

Its primary function in DOS is to score whichever game SIDs need scored. A key duty of the home-team SID at each NCAA contest is to provide scoring and final statistics. In the days before StatCrew, this meant rigorous handmade play-by-plays and box scores. With the advent of StatCrew, schools and SID offices could train employees to use the software to score more quickly and efficiently using StatCrew's coded key-entry system. It is not a system inherently understandable, but the learning curve is not steep enough to warrant ineffectiveness.

For its time, it was a technical marvel, combining a simple DOS interface, a keystroke-only scoring entry and newly-emerging online components simple enough for the SIDs who needed it to understand and use. It was also incredibly convenient, as its files were compatible with all schools who used the software – a feature that still keeps the StatCrew engine thriving. StatCrew grew incrementally with the times, focusing little-by-little on internet integration; for example, with XML's for live, online viewing during contests. The company enjoyed stability all the way up to and through its recent acquisition by media-giant CBS Interactive.

However, even with (potentially) more resources to devote to improving and upgrading its core product, StatCrew has remained relatively static as a product. Its “Legacy” line of software still employs the same DOS interface to this day, a factor the company knows is an issue going forward.

First, the literacy of DOS grows thinner and thinner each year, as the populace who grew up with it grows smaller. Second, the operating systems that once upon a time supported such a system have become antiquated; to run StatCrew, SIDs still need to run a version of either Windows XP (which no longer receives security updates) or a 32-bit version of Windows 7 or later. Knowing this, StatCrew recently created an alternative in its “Next Generation” line of software that combines cloud computing and an updated interface for all necessary components for newer operating systems.

The problem, though, is that attempts to introduce the NextGen line of software for newer operating systems has not gone over well. First, the operating system issues still exist. The software can run on a Mac now, but cannot interface with a scoreboard. Everything works well on Windows, but it still has to be 32-bit or lower. Worst of all, the NextGen line has been met

with lukewarm response (and use) from SIDs around the country. The NextGen line is now in its sixth year of beta testing (for lack of a better term), and much of that is due to the comfort and familiarity SIDs feel with the Legacy line of products, not to mention StatCrew's continued support and assistance in the Legacy line.

The software still works well (with the occasional kink), but the line has grown static. And, most importantly, this is a fixed group of customers with no other viable alternatives in the marketplace at the current time. Which means one of two things: StatCrew can improve their line of products to stay relevant, or be swept under by a competitor ready to take it down and offer up an alternative.

Study Purpose and Significance

Customer satisfaction and brand loyalty are normally easy enough to gauge and evaluate through a multitude of avenues, but what about in the case of a niche, monopoly market? How important is the satisfaction of the customer when there is no viable competition to avert their attention? While on the outside the problems StatCrew and its constituents encounter may seem like a controlled environment not worth studying due to its uniqueness, the service StatCrew provides is not only to the benefit of the schools in question. The stats created on this software are crucial to the entire college sports media at large that depends on accurate and timely statistics to do their own job. Thus, the aims of this study become far more muddied than simply a correlation between supplier and consumer.

This study – through the use of a needs analysis, a literature review and a consumer survey sent to 345 Division I sports information directors – will attempt to begin to unravel the workings of the relationship in such a monopoly, and hopefully come to some conclusions about

what StatCrew may face in the future.

From here onward, this paper will be divided into six additional parts: (1) a literature review covering several relevant topics, such as behavior of monopolies, customer satisfaction and a needs analysis hypothesis; (2) the research questions and objectives of the quantitative portion of this study; (3) the methodology used in the quantitative portion of this study; (4) an analysis and synthesis of the data collected in the survey of Division I SIDs; (5) an updated needs analysis based on the findings and (6) the conclusions, recommendations and limitations stemming from the findings coming from said survey.

CHAPTER TWO

"Loose Monopolies"

First, a definition of the kind of monopoly StatCrew enjoys must be defined. The first piece to delve into is also the most important for the purposes of this study: from 1985, Alan R. Andreasen's "Consumer Responses to Dissatisfaction in Loose Monopolies," which aims to test Albert Hirschman's theories about consumer behavior when faced with what he coins a "loose monopoly," which Hirschman defined in 1970.

Hirschman's operational definition of a loose monopoly – as summarized here by Andreasen – is a situation where companies hold "near-monopoly control" of a market where there is little to no competition, and that these types of monopolies are "insulated from self-policing mechanisms in the marketplace" that are happening elsewhere around them, regardless of quality (Andreasen, 1985, 135). Andreasen, in order to service his own research, then delves into Hirschman's concept of loose monopolies and their effects – both on the consumer and the economy at large in order to better understand Hirschman's then-misunderstood theories and postulations regarding monopolies.

Hirschman's biggest assertion in his dissection of monopolies is that normal economic incentive adjustment – that being, the market will adjust a company's core aims and quality control on supply and demand alone – do not particularly apply to companies that enjoy monopolies. His main disagreement – laid out in a three-point presentation – is that in normal, competitive markets there are other avenues for consumers to "exit" to that allow for suppliers to gauge the success of their product(s). The normal three actions of the consumer – "exit, voice or loyalty," the same title as Hirschman's 1970 book – are limited in scope when within a monopoly

as opposed to competitive markets. There are several factors he then lays out about how exit, voice and loyalty are the principal response in competitive markets where the quality is unsatisfactory – but, that is wholly dependent on the nature of the industry involved. For instance, what kind of services are offered, what kind of feedback options are available and whether or not there are viable alternatives to the product in the industry in question (Hirschman, 1970).

These findings will be very important to the case of StatCrew, particularly about alternatives in a "loose" monopoly and feedback procedures for consumers. StatCrew, as aforementioned, is exempt from the normal rules of the market (like Hirschman says) as there is no true competition for the consumers to exit to for it to feel the loss of business. The operational definition of "loose monopoly" fits StatCrew splendidly, as it has a "near-monopoly control" of the market and do not have to worry so much about the market at large outside of its bubble. What makes its monopoly loose is that, while no worthy competitors exist at its level right now, at lower levels of collegiate sports there are other companies that exist that could challenge at a higher level someday – particularly if StatCrew's product is viewed as unsatisfactory (as this study will attempt to determine). But, as of now, StatCrew reigns supreme at the Division I level.

Antitrust?

What is the future of the monopoly in the 21st century? In the United States, antitrust laws were created to dismantle the powerful monopolies of the early 20th century – primarily Standard Oil. But, do those laws – aimed at companies that dealt with naturally limited resources – apply to companies in the technology industry where the main export is infinitely-available information? Mitsuru Iwamura attempts to make an argument in his 2003 piece "Monopolies in

the Information Society – When Interests Collide," that decisions on how far antitrust can exert itself into information companies will be a hotly debated topic of the information age with giants such as Microsoft, Apple and AT&T in question. At this stage, the 21st century economy is very dissimilar to that of the industrial age that helped monopoly giants like Standard Oil, but if the government were to step in at some point, competition could flood the technology market (Iwamura, pp. 146-48, 156-57).

While StatCrew is nowhere near the level of some of the companies listed above, Iwamura's piece is specifically pertinent to the discussion about StatCrew in that the economy is rapidly changing. StatCrew is nowhere near large enough to warrant legal ramifications (especially since it has a parent company, CBS), but this piece serves as a reminder that, whichever way you slice it, today's economic forecast in monopolistic markets is extremely different than it was a century ago. StatCrew could chose to either maintain the status quo in terms of product quality, or a competitor could arise to challenge it very soon.

Needs Analysis Hypothesis

To devise a needs analysis for the future of StatCrew software, first there must be: (A) operational definitions of "needs" (B) the steps involved in a needs analysis and (C) a proposed hypothesis of needs relative to consumers prior to the survey results.

A "need" in the analytical sense can be defined in three ways: (1) a "gap between what is and what should be (Witkin et al.,1995); (2) a "gap between real and ideal that is both acknowledged by community values and potentially amenable to change (Reviere, 1996); or (3) a need "may be different from such related concepts as wants (something people are willing to pay for) or demands (something people are willing to march for). (McKillip, 1987).

According to McKillip, 1998, there are five guidelines to follow when conducting a needs analysis: (1) to **identify** the **audience** and **purposes** for the analysis; (2) to fully **describe** the **target population** and **service environment**; (3) to figure out **who to ask**; (4) to **assess the needs** and which are most important; and (5), to **communicate the results**. (McKillip, 1998).

Under the first step according to McKillip, the target audience for the needs analysis must be identified. This step does not deal with the survey participants (that will come later), but rather who is affected by the situation we are analyzing. Thusly, the target audience is any person(s) or entities that come into contact with the statistics StatCrew generates and makes available; which, can range from the SIDs creating them, to the media crafting stories around them all the way down to the average sports fan who enjoys having statistical information available. The first step also dictates that a purpose to the analysis must be stated, and it is this: to finds a gap between what is present and what is needed out of current statistical software provided by StatCrew.

The next step is to fully describe the target population and service environment. As stated earlier, the target population for the analysis are those in contact with the statistics made by StatCrew, whether that is the primary source (SIDs) or secondary (media, fans, etc.) The service environment around StatCrew is that of its interface, delivery system and personnel. Computers are the most effective means of compiling statistics, so it is a given that an improved system to improve upon and needs discovered would be through an updated or overhauled computer system for the statistics.

Third, McKillip suggests to discover who to ask directly. In this instance, the needs analysis will be devised following a short, 10-minute survey that was emailed to 345 Division I

sports information directors – the primary users of this software.

Fourth on his list states to assess the needs at hand. Entering the survey, the hypothesis of this paper is that the most important needs in the future of StatCrew include: user interface upgrade, improved customer support, operating system issues, ease of use and general usability.

McKillip states the final step in the process is to communicate the results; which, will be done later in this paper following the data analysis of the 345 Division I SIDs the survey was sent to.

Feedback and Customer Satisfaction

Next, a discussion into how feedback helps businesses better their products and services. Later the survey applicants will respond as to what they believe StatCrew's service quality to be, and this next piece could be crucial in a future recommendation on how it conducts business with its clients. Kristin M. Berglund and Timothy D. Ludwig of Appalachian State University wrote a study in 2009 titled "Approaching Error-Free Customer Satisfaction Through Process Change and Feedback Systems," on the psychological effects of performance feedback and its correlation to service quality. In the section on performance feedback, the authors delve into a history of research on the effects of performance feedback; how and when to administer it and other such details. To help certify findings in previous studies, the authors created their own to test their validity. They experimented with warehouse workers on the types of feedback they received on their work and how often they received it. Their findings were that regular performance feedback helped cut down on errors by workers in the warehouse significantly – even nearing 100 percent quality at points (Berglund, et al, pp. 19, 21-24, 39-43).

Why this may be crucial to StatCrew is that consistent feedback from its consumers may

help in its search for a better product for the next generation of operating systems. The survey later will address customer service.

Interactive Design Principles

"Interactive Design" may be a newer field of study, but its principles date back to the beginnings of human cognition. In his textbook "Designing for Interaction: Creating Innovative Applications and Devices," Dan Saffer defines interaction design simply: it deals with connecting people through products. The term product can be used widely, as it not only refers to obviously interactive products (computers, phones, software, websites, etc.), but also to physical items like remotes or tools. How users interact with anything in their daily lives can be construed as an element of interactive design (Saffer, pp. 2). Following are several of Saffer's musings on interactive design (ID) and how it could correlate to StatCrew – a product that users interact with, which generates information many other interact with as a byproduct.

Saffer argues that ID is about behavior rather than appearance or aesthetic design, which is far more difficult to observe and correct than normal design flaws (Saffer, pp. 3-4). For instance: if the survey participants said StatCrew's user interface was a major dissatisfaction, the easiest part to rectify would be the aesthetics. What would be challenging to programmers would be to identify the behavioral issues within the user interface that is causing problems.

Also according to Saffer is the idea that ID is contextual by nature, meaning that it solves specific problems under a particular set of circumstances using available materials. The example Saffer offers is the Mosaic web browser from the 1990s. For its time it was a marvel, but today it would be beyond antiquated. It served its purpose for its time and context (Saffer, pp. 4). For StatCrew, even though it has attempted to update its product, its most popular product (as the

survey will corroborate later) is still a line of DOS programs popular in the 1990s.

At the current moment in the ID world, Saffer argues that "user-centered design" – a self-explanatory term relating to ID created with the users input at the forefront – is in vogue. Saffer offers up an example and a counter to this line of thought: Windows, with its extensive user testing; and Apple, with its brazen image as innovators rather than user-centered developers (Saffer, pp. 4-5). Where this is pertinent to StatCrew (or a competitor) is that in the coming years as technology continues to advance forward, it will have a choice to make as to what is more important: fixing issues that are important to its consumers, or to be technological innovators.

Saffer also details three schools of thought when it comes to interactive design: (1) a **technology-centered view**, which takes raw potential by engineers and programmers and turns it into usable products; (2) a **behaviorist view**, which argues that ID is about defining behavior of artifacts, environments and systems, while focusing on functionality and feedback; and (3) a **social interaction design view**, which revolves around facilitating communication between humans through products, making technology nearly irrelevant since any kind of object or device can make a connection between people (Saffer, pp. 4-5). Going forward, StatCrew could benefit from one of the above, an amalgamation of them or none of the above.

However, Saffer also contends that ID is not about choosing among multiple options, but rather it is about creating options instead of choosing among two undesirable avenues (Saffer, pp. 6). Saffer also discusses that constraints and limitations are an objective reality for interactive designers. Thus, Saffer argues that the ultimate solution should uniquely address the issues of a particular problem in order to focus capital and energy toward progress. This is crucial for any company or institution, not just StatCrew: a viable yet constructive mission.

CHAPTER THREE

The objectives of this study are to: (1) gauge customer satisfaction and trust in the StatCrew brand; (2) to investigate users needs in sports statistics reporting and how the current system should be improved; and (3), to gauge whether or not dissatisfaction is high enough that there is an unexploited market in collegiate statistics software for either a competitor to take advantage of, or for StatCrew to remedy.

Research questions postulated include: (1) on the whole, are SIDs happy with the StatCrew brand and product? (2) Are there ways the business model can improve? And (3) What can a possible competitor use to topple the StatCrew monopoly?

This study is a continuation of a small, pilot survey that was conducted by myself as a precursor to this paper for MCMA 537 (Intro to Mass Communication Research Methods) in Summer 2014. That survey was only sent to 20 individuals (by design), thus setting the groundwork for this larger inquiry.

CHAPTER FOUR

For this study, a 27-question email survey was sent to 345 Division I sports information directors from across the United States. A total of 134 responses were collected, yielding a response rate of 38.8 percent – far above the target range of 25 percent (86 responses) and 35 percent (120 responses). The survey, along with the cover letter and the data, can be found in Appendix One and Two.

In order to gain an appropriate picture of StatCrew's customer satisfaction among its constituents, a multitude of specific questions were asked, such as: operating system preference, experience in the sports information field, and experience with the next generation line of StatCrew products. Some other background information questions were asked, such as age, conference and size of office.

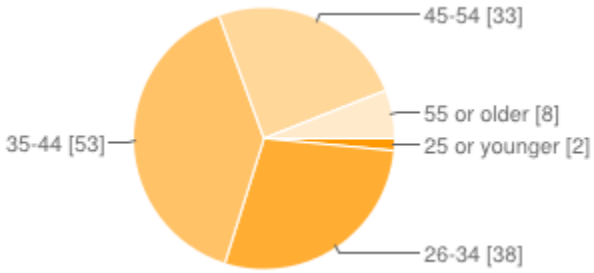
Several different question types were used for maximum effect, including multiple choice, forced answer, Likert scale and an opinion box for comments. A copy of the survey and cover letter sent to all 345 Division I SIDs is attached at the end of this research paper.

CHAPTER FIVE

Question One: To which conference does your school belong? (Check any that apply)

This question lists each of the Division I athletic conferences in the United States, and respondents are able to choose multiple conferences in case their school belongs to more than one. The responses to this first question have no real purpose to the rest of the survey other than to gauge which conferences had the most respondents.

Five conferences – the American Athletic Conference (AAC), Atlantic-10 (A-10), Conference-USA (C-USA), Mid-American Conference (MAC) and the Pacific-12 Conference (Pac-12) – each had seven participants for 5.2 percent of the survey population. Four of those five conferences (the A-10 being the odd one out) boast top-level NCAA football, and all are major NCAA basketball conferences, meaning these five all come from relatively stable economic footing. Again, no real impact on the rest of the survey other than to gauge which conferences were most able to complete the survey.



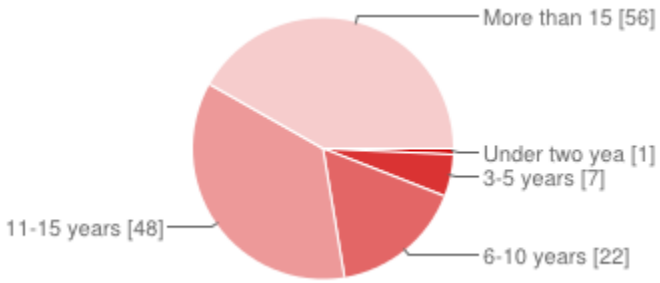
Question Two: Your age: (Figure 1)

As expected, a large portion of respondents are between the age of 26-54 (92.6 percent, in fact), with the largest respondent age group being 35-44 year-olds (53 participants, 39.6 percent of respondents). This outcome is expected due to a simple reason: the most senior sports

information director – that is, the director of each office – was contacted at each school. It is inherent to infer that whomever is in control of the entire sports information office is sure to have plenty of experience and, thus, be older than younger members.

Where this could be a crucial component is when discussing the satisfaction (or lack thereof) with StatCrew's brand and products later on in the survey. For 64.2 percent of survey participants (age groups 35-44 and 45-54), StatCrew was once cutting-edge technology and have possibly grown accustomed to the DOS interface over time.

Question Three: How long have you worked in sports information at the Divison I level? (Figure 2)

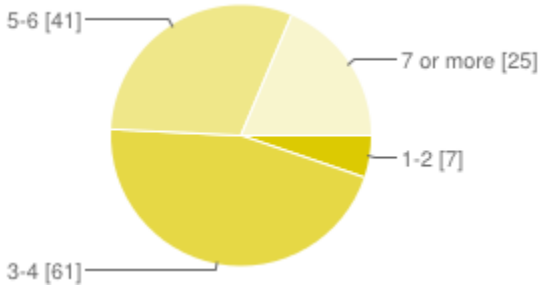


This question is very similar in scope and result to the age question. The purpose of this is to calculate how long respondents have been using StatCrew, as most lower levels (NCAA Division II, III, etc.) do not exclusively employ it as the main statistics software. One can assume that those in the business for longer may have grown brand loyal and comfortable with the company and their services.

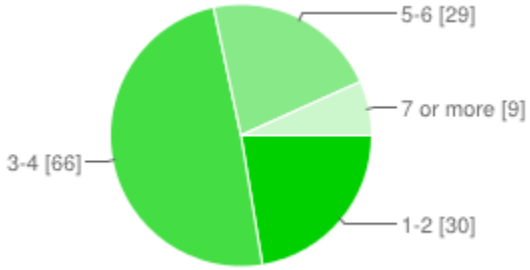
The takeaway from these results is correlative to the previous question. 41.8 percent of participants (56 respondents) have worked at the Division I level for 15 years or more, followed by 35.8 percent that said they were in between years 11-15 (48 respondents). With this data, it can be inferred that a large fraction of the survey pool have been in the business long enough to

where StatCrew's original software was a more recent addition to the world of collegiate athletics. Which, as aforementioned, may be crucial later on to compare satisfaction or dissatisfaction, and perhaps brand loyalty to literally the only software these participants have ever known.

Question Four: Total size of office? (Full-time employees/graduate assistants/interns that cover sports) (Figure 3)



Question Five: Number of full-time staff? (Figure 4)

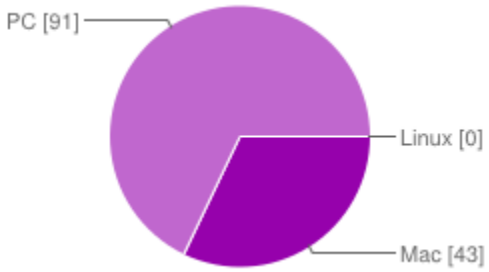


These questions serve little to the overall goals of the survey, but it does have several interesting connotations. First, the primary goal of these two is to gauge how wealthy the schools that responded are; for the most part, size of office can be directly correlated to having more available funds to staff larger offices.

In Question Four, the largest percentage was 3-to-4 employees for 45.5 percent of all respondents, which is on the lower half of the scale. Next is 5-to-6 at 30.6 percent, followed by the two extremes: seven or more (18.7 percent) and 1-to-2 employees (5.2 percent). Question

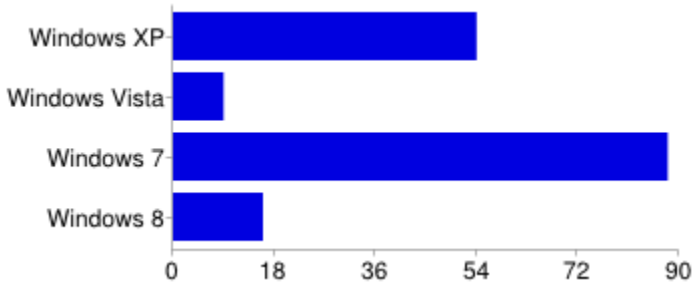
Five predictably gets similar rates: 49.3 percent for 3-to-4, 22.4 percent for 1-to-2, 21.6 percent for 5-to-6, and 6.7 percent for seven or more.

Question Six: Does your office use Mac, PC or Linux for day-to-day use? (Figure 5)



By a two-to-one margin, PC (67.9 percent) won out over Mac (32.1 percent), which is not surprising considering the entry cost for Macs; Linux was included just out of curiosity. However, this question should become crucial later on in the satisfaction/dissatisfaction section of the survey. A total of 32.1 percent of respondents use Mac, which means that due to StatCrew not being completely compatible with the operating system that users need to either (A) buy a separate PC for StatCrew work or (B) install a virtual machine to emulate Windows on their Macs. An important qualifier in this question is the clause, “for day-to-day use,” which does not necessarily mean using for StatCrew. A later question will gauge how survey participants score live events and generate statistics.

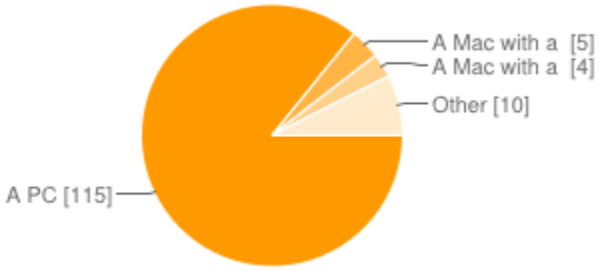
Question Seven: What version of Windows do you use for StatCrew? (Check any that apply) (Figure 6)



As aforementioned, you cannot currently score with a Mac computer, so every SID in the country has to own Windows in some fashion. To be even more specific, SIDs must also own a version of Windows that is 32-bit or lower. The leader in the survey is 2009's Windows 7 at 65.7 percent of survey participants; followed by the unsupported Windows XP with 40.3 percent; then the most recent iteration, Windows 8, with 11.9 percent; and finally, the highly unpopular Windows Vista with 6.7 percent.

Most alarming is that Windows XP received 40.3 percent of the vote, an operating system that no longer receives any support or security updates from Windows. Thus, out of either convenience or usability, SIDs are sticking with a dangerously out-of-date operating system to score on rather than go through getting a newer version of Windows.

Question Eight: When live scoring, do you use: (Figure 7)



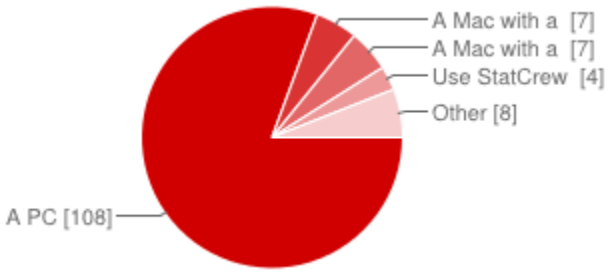
To explain, here are what these three options mean: Option A, a PC, means just that; the SID has a PC with Windows installed on it. Option B, a Mac with a partition, booted into Windows, means that a Mac user has split their Mac hard drive in two and installed a version of Windows on the partitioned side. Option C, a Mac with a virtual machine that employs Windows, is similar to Option B, but instead of creating a partition, this Mac user has an application that runs on its Mac operating system that mimics a version of Windows through what is called a virtual machine.

This question is meant to gather how SIDs utilize the StatCrew software when scoring live events, and the result is a resounding response (85.8 percent) that SIDs have a dedicated PC for live scoring. Where this question begins to get interesting is if the day-to-day use question is compared to it. Recall that 32.1 percent of survey participants indicated that they used Macs in their offices. Thus, it can be directly inferred that a significant sliver of schools which indicated they were Mac schools also had to spend additional money (at state schools, taxpayer funds) to purchase a dedicated PCs for only scoring live events for each sport as needed.

A very small section of participants indicated a combination of a Mac with a Windows virtual machine or booted into Windows using a partition. There were also 10 “Others,” most of which hold a combination of PC or Macs with virtual machines.

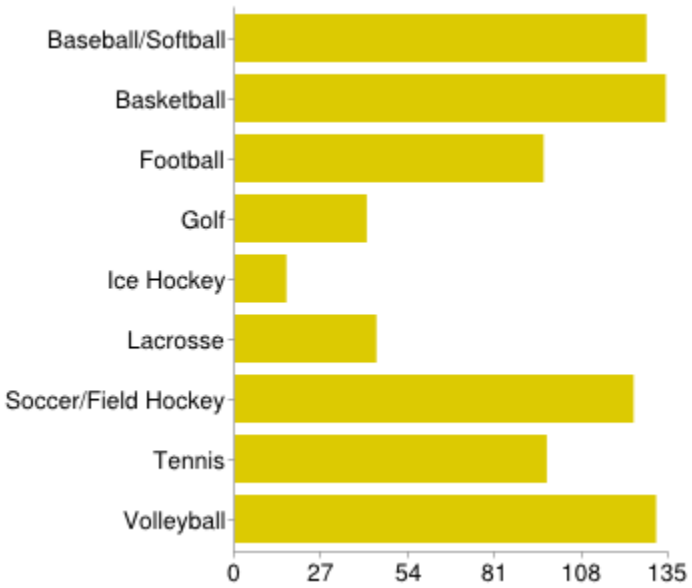
The most important takeaway from this question, though, is that into the second decade of the 21st century, 32.1 percent of schools that prefer Apple are still spending (possibly taxpayer funds) on a separate PC or virtual machine because the scoring software they need has failed to adapt to the popularity Mac has gained in the last three decades.

Question Nine: When generating stats, do you use: (Figure 8)



Question Nine is similar in structure to Eight, but with one key wording difference. For an SID, there is a large difference in using StatCrew to score a game and using it to generate statistics reports. Some may keep their scoring computer with them at all times for such a purpose, some may have a virtual machine for the occasion; the possibilities are varied and numerous. This question ends up similarly with 80.6 percent of respondents using a PC to generate (compared to 85.8 who use it to score). The numbers for partitions and virtual machines are similarly low, but a fourth option – StatCrew Next Generation – gets three percent of the vote. In order to attempt to entice users to its NextGen products, StatCrew has made the two completely compatible with one another, meaning one can score with Legacy on a PC and generate their statistics using NextGen on their Mac – so long as the Cloud server has been updated with the game/match information. That three percent will be compelling in a future question.

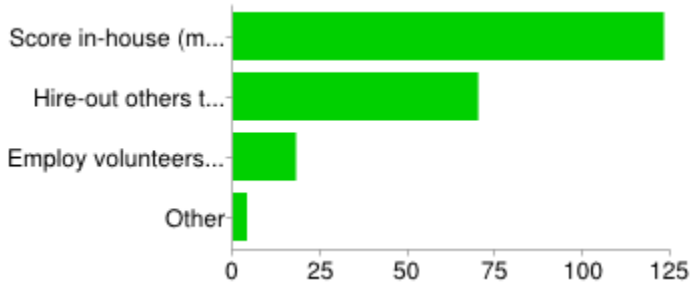
Question 10: Please check each sport your office uses StatCrew for: (Figure 9)



A very straightforward question, as the sports that SIDs need to score are directly related to the sports their school offers in the first place. The purpose of this question is to simply see which version of the software is most widely used by SIDs around the country. Of the 134 respondents, the most popular were basketball (100 percent), volleyball (97.8 percent), baseball/softball (95.5 percent) and soccer/field hockey (92.5 percent).

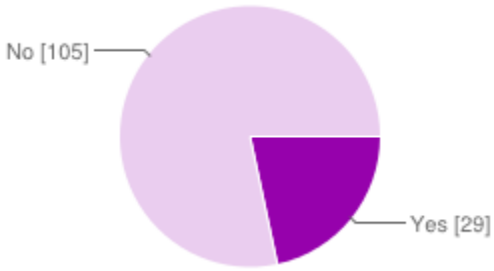
These responses will be important when the respondents gauge the level of difficulty of each program later on. What is also interesting to point our here is that while StatCrew may seem behind with the times, their NextGen line of software does address two of its most widely used programs in basketball (first, 100 percent) and soccer/field hockey (fourth, 92.5 percent).

Question 11: How does your office score live events? (check any) (Figure 10)



Another straightforward question attempting to calculate the level of autonomy or privilege an SID has when scoring. Being able to delegate represents prestige and wealth. For the most part, SIDs and their employees do their own scoring, but there is also a significant portion of hiring-out the job to others going on as well. In overall relation to this research, though, this question holds little significance.

Question 12: Has your office ever used StatCrew Next Generation Software? (Currently only available in soccer/field hockey and basketball) (Figure 11)

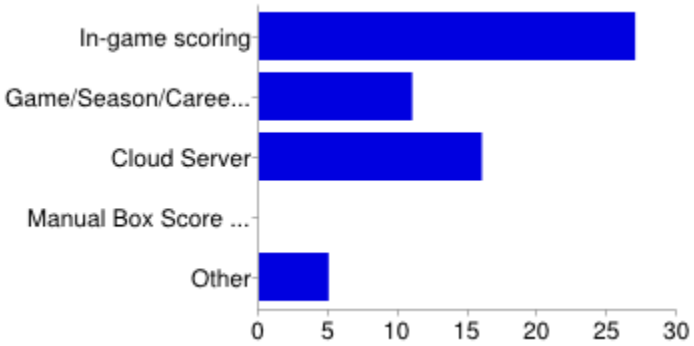


This question is, perhaps, the most indicting evidence of StatCrew's stasis as a software developer. Only 21.6 percent of survey respondents have ever used their NextGen line of products, meaning a whopping 78.4 refuse to move past the days of DOS. In full disclosure, NextGen is only available for soccer/field hockey and basketball, but – as a previous question answered – 100 percent of all schools that responded use StatCrew for basketball. Thus, whether

it is familiarity, comfort, or distrust in the new line of products, nearly four-fifths of the survey pool are not even attempting the new software. This will become crucial when the survey turns to ask gauge customer satisfaction. In either scenario, the answer to this question should be telling of numerous things about StatCrew as a company, including competency, marketing, and overall customer trust in the brand.

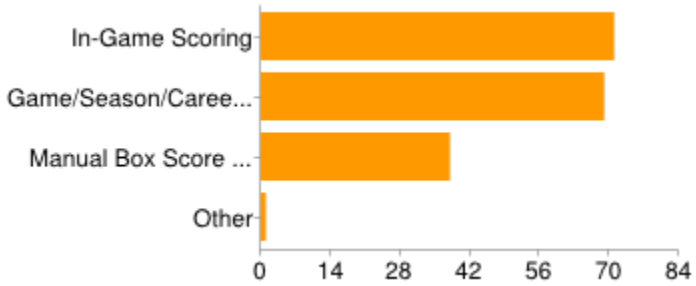
Question 13: Under what situation(s) have you used NextGen? (Check any that apply)

(Figure 12)



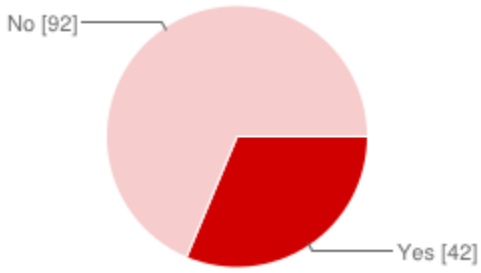
This question was only required for those 21.6 percent of survey-takers that indicated they had ever used the Next Generation line of products by StatCrew. Most popular is the in-game scoring on NextGen, followed by the other functions like stat generation and the cloud server – the latter of which is exclusive to NextGen. Interestingly, not one of the respondents have attempted the manual box score input on the NextGen line. Manual box score entry is a useful function for schools looking to digitize their old hand-written box scores for online hosting.

Question 14: Do you still use Legacy for any of the following functions? (check any) (Figure 13)



Unfortunately, this question and the responses cannot be effectively included into this report. Like the previous question, it was only meant for those who answered "Yes" on Question 12, but it is obvious that more than those 21.6 percent of respondents participated in this question. The survey should have been designed better to counteract such an event, making this a very regrettable error.

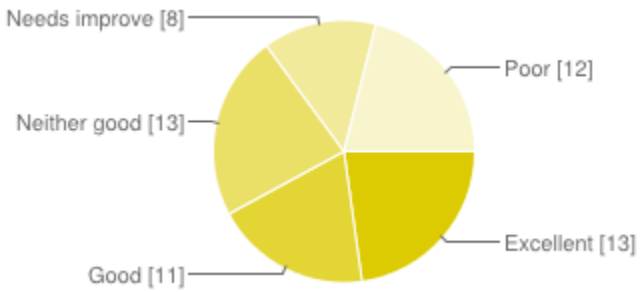
Question 15: Has your office ever used the StatCrew Cloud Connector for the Legacy software? (Figure 14)



This question (and its responses) hold some very similar qualities to that of Question 12. First, some background: the Cloud Connector is an extra program that allows Legacy users to connect to the NextGen cloud server for either users who are not fully on-board with NextGen yet or for sports not yet offered by NextGen. Again by a two-to-one margin, participants

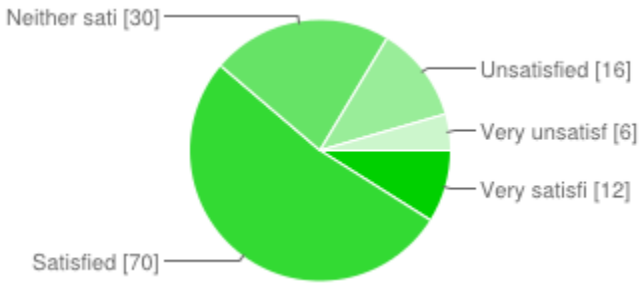
responded no – meaning that, combined with Question 12, there are a possible two-thirds of survey respondents that have had no contact with the Next Generation line of software or the cloud server in any sort of fashion. This is of great importance to both StatCrew (to remedy) or to a potential competitor (to exploit).

Question 16. How would you rate the Cloud Connector? (Figure 15)



This question was only intended for those who answered "Yes" to Question 15, yielding a much more usable response than Question 14. For respondents who have used the Cloud Connector, the opinions on its quality are wide and varied. The two highest responses – "Excellent" and "Neither good nor bad" received 9.7 percent of the vote – seem to bode well for StatCrew, but the next highest is "Poor" at nine percent even. Compared with the previous questions, it's clear that more respondents need to begin using either NextGen or the Cloud Connector to get a conclusive answer to this question.

Question 17: Are you satisfied with the quality of product StatCrew has produced/is producing? (Figure 16)

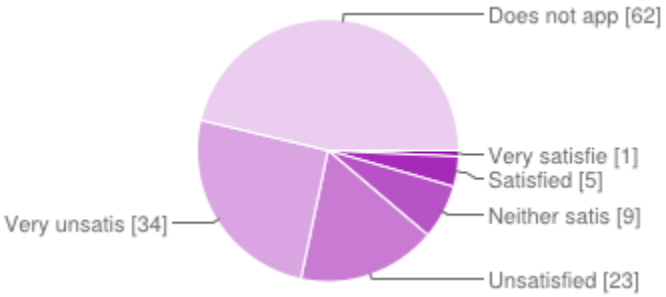


This is, potentially, this most important question and response for this study. Regardless of everything covered previously – the fact that Mac users have to buy new computers or that it primarily still uses a DOS interface or anything else – 52.2 percent of respondents are satisfied with StatCrew's line of products, past and present. Although 22.4 percent are neither satisfied nor unsatisfied and 11.9 percent are in fact unsatisfied, there is little affirmation on the extremes of the scale. Only nine percent of respondents are very satisfied, and only 4.5 percent are very unsatisfied.

The responses to this question are a huge win for StatCrew, who – despite whatever perceived shortcomings it possesses – has maintained a loose monopoly in this market while keeping satisfaction above 50 percent, a remarkable feat for a company whose product has not had a true makeover since its inception decades ago. It's clear there is some brand loyalty in this niche market (particularly since there are no worthy competitors), which makes StatCrew's job easy to increase overall satisfaction and perhaps profits: shore up measured shortcomings with its target audience – its users.

Question 18: Are you satisfied with the current state of StatCrew Next Generation?

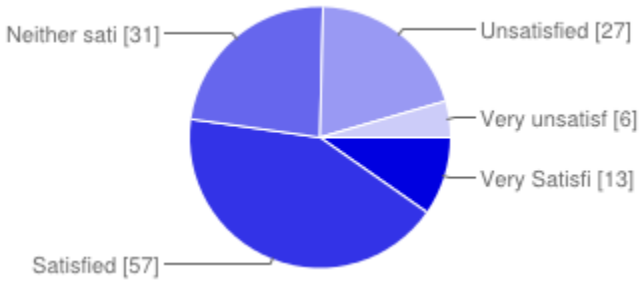
(Figure 17)



On the other side of the coin, here is a significant blow to StatCrew, which has tried to move into the 21st century with its Next Generation software. The largest portion of this response is due to the fact that a massive portion of the survey audience has no experience with the software. That aside, the scales are still tipped unfavorably in StatCrew's direction on this question. A total 25.4 percent of respondents are very unsatisfied with NextGen, followed by 17.2 percent that are unsatisfied. Only six total participants are satisfied with the current state of NextGen, including one who is very satisfied.

Question 19: Are you satisfied with the quality of customer support from StatCrew?

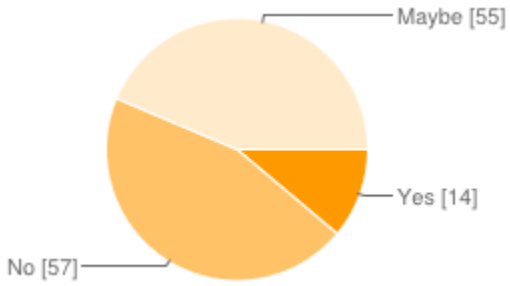
(Figure 18)



On the surface, it may look easy to dismiss this result as a win for StatCrew in the customer service department, but the response is varied. The largest total, 42.5 percent of

respondents, are satisfied with the level of customer service they receive, but 23.1 are either satisfied nor unsatisfied and 20.1 are unsatisfied. Again, the extremes are outliers with 9.7 on very satisfied and 4.5 very unsatisfied.

Question 20: For those who are not using next generation software, do you foresee yourself using it any time soon? (Figure 19)



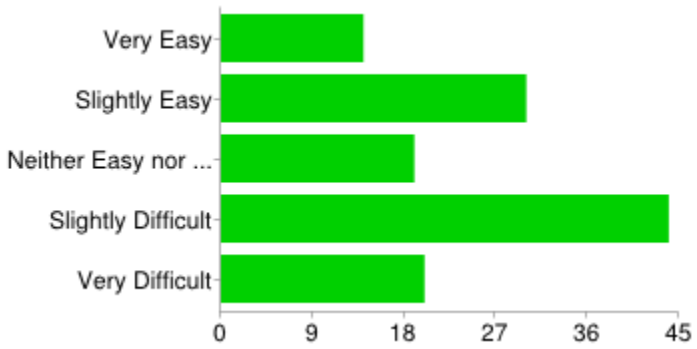
Coupled with earlier questions regarding StatCrew's NextGen line of software, it is clear that changes need to be made. In this instance, 42.5 percent of respondents flat out said no to using the software, and 41 percent voiced indecisiveness with a maybe vote.

Question 21: In terms of difficulty, rate the different sports StatCrew covers in Legacy format that you use.

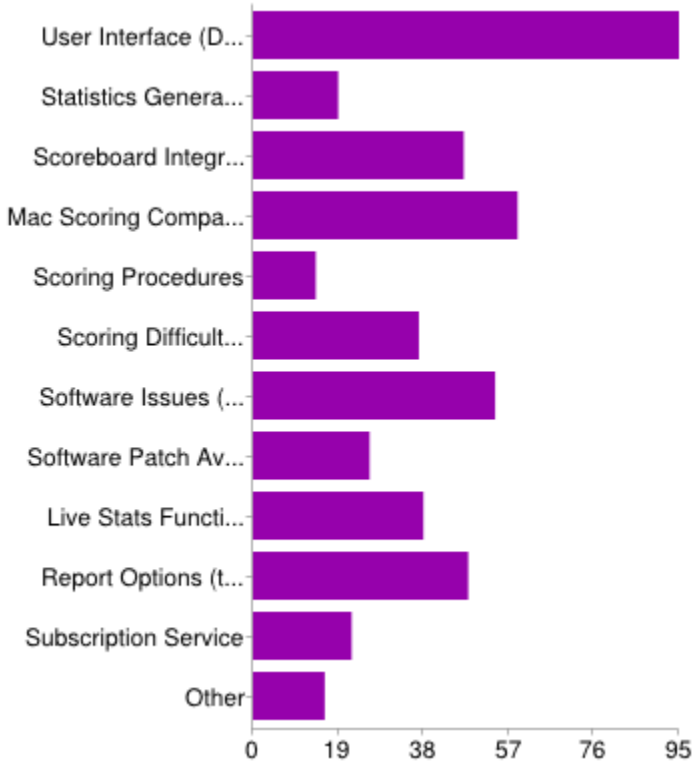
For this question, respondents were asked to rank each sport on a scale from very easy to very difficult. For the most part, participants ranked these sports as easy to score with the exception of one program: volleyball.

Several things can be drawn from this response. First, many of the programs that StatCrew offers – however antiquated the operating system may be – seem to be simple for SIDs to use, which is a positive for the company. On the other hand, the resounding difficult votes for volleyball suggest that alterations to those programs could help the company down the line in maintaining consumer positivity about the product.

VOLLEYBALL (Figure 20)



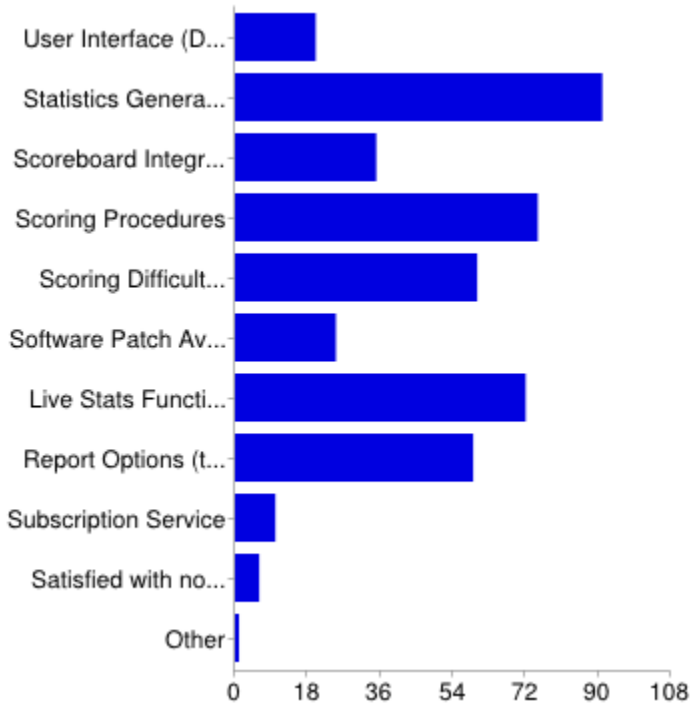
Question 22: Please check any of the following potential problems with StatCrew's software you are concerned and/or unsatisfied with. (Figure 21)



For this question, this paper will pay particular attention to categories that received 25 percent of the vote or more (as will its sister question, Question 23). Taking that criteria into account, the top potential problems SIDs are concerned with are: User Interface (DOS or

NextGen), 70.9 percent; Software Issues, 40.3 percent; Report Options, 35.8 percent; Scoreboard Integration, 35.1 percent; Live Stats Functionality, 28.4 percent; and Scoring Difficulty/Learning Curve, 27.6 percent. A particular key to take away from this question is that 70.9 percent of respondents are concerned about the user interface, but 52.2 percent are generally satisfied with StatCrew on the whole. While that may sound negative for StatCrew, that actually is good news. Its base consumers generally support them in the face of interface issues.

Question 23: Please check any of the following functions/situations in which you are satisfied with StatCrew's software. (Figure 22)



As with the previous question, here are the topics SIDs are generally satisfied with (that received more than 25 percent of the vote): Statistics Generation, 67.9 percent; Scoring Procedures, 56 percent; Live Stats Functionality, 53.7 percent; Scoring Difficulty/Learning Curve, 44.8 percent; Report Options, 44 percent; and Scoreboard Integration, 26.1 percent.

Compared to what SIDs were unhappy with, this list is much larger – an excellent sign for StatCrew. Much like Question 17, regardless of its shortcomings, StatCrew has made a usable product for decades now that has an ingrained (if monopolized) consumer base. If the company can make some changes to shore up its shortcomings highlighted elsewhere in the survey, the trust in the StatCrew brand (and satisfaction) will rise.

CHAPTER SIX

An updated needs analysis is now needed following the survey in order to take the new data into account.

As aforementioned, there are five guidelines to follow when conducting a needs analysis: (1) to **identify** the **audience** and **purposes** for the analysis; (2) to fully **describe** the **target population** and **service environment**; (3) to figure out **who to ask**; (4) to **assess the needs** and which are most important; and (5), to **communicate the results**. (McKillip, 1998).

Steps four and five are the only ones of McKillip's guidelines that need updating following the survey results. Entering the survey, this paper hypothesized the most important needs facing StatCrew consumers included: user interface upgrade, improved customer support, operating system issues, ease of use and general usability. Following the survey, it can be said unequivocally that a user interface update and compatibility with newer operating systems are in dire need.

However, respondents did not reflect a higher need for improved customer support, and did not agree that the difficulty of the program was a factor (sans the case of volleyball, of course). Rather, it appears that StatCrew's consumers are generally satisfied with the product (52.2 percent, to be exact), meaning that StatCrew merely needs to tackle the big picture issues such as interface, without losing the features SIDs have become accustomed to and currently enjoy – even if many of them are antiquated.

CHAPTER SEVEN

As this paper found out, merely because a product or service is antiquated does not mean it is not effective at holding down a consumer base. While StatCrew has many problems with its product, it also has a plethora of features to hang its hat on at the end of the day, adding to the overall value of its business.

The original objectives of this research were: (1) to gauge customer satisfaction and trust in the StatCrew brand; (2) to investigate users needs in sports statistics reporting and how the current system should be improved; and (3), to gauge whether or not dissatisfaction is high enough that there is an unexploited market in collegiate statistics software for either a competitor to take advantage of, or for StatCrew to remedy.

As the survey uncovered, customer satisfaction was above 50 percent at 52.2 percent of respondents. While participants voiced concerns with the brand, the fact that 52.2 percent of respondents claim to be generally satisfied with the company speaks for itself. In the updated needs analysis, it was uncovered that the big picture issues facing users – primarily user interface and operating system compatibility – are in the most dire need. And although the study uncovered that 52.2 percent of respondents are satisfied, there are enough shortcomings that could potentially be either advantageous to StatCrew if acted on them, or malevolent if not.

Research questions postulated included: (1) on the whole, are SIDs happy with the StatCrew brand and product? (2) Are there ways the business model can improve? And (3) What can a possible competitor use to topple the StatCrew monopoly?

As stated, 52.2 percent of SIDs surveyed were satisfied with StatCrew's line of software. The survey also found several holes in its operation (such as the dire need for a new interface),

but also found a great affection among consumers for the things StatCrew does right. As of the writing of this survey, a possible competitor's only chance to outbid StatCrew would be to replicate much of what it does as closely as possible, but with interface design and user interaction at the forefront of objectives.

At the close of this study, the largest question going forward is why there seems to be an insurmountable reluctance to change among consumers in this industry. Although these consumers find themselves within a loose monopoly with little to no choice, their own actions (or inaction) have helped perpetuate the stasis StatCrew has found itself in. Ironic, considering that the feature most desired among these consumers is to upgrade the backbone of the software into the 21st century without losing its remarkable functionality it has known grown accustomed to for the better part of two decades. StatCrew has attempted to do such a thing with its NextGen line, but the reaction among consumers within this monopoly – remember, only 21.6 percent of respondents said they had ever tried the new software in any capacity – has been ill-afforded to a technical revolution.

At the same time, StatCrew has enjoyed success with its monopoly at this level, and – as Hirschman postulated – have little economic incentive to dump resources into new and adventurous products when a simple patch or two to the old and beloved software will get the jump done. It is a vicious cycle, a symbiotic relationship with both parties getting by on their old and comfortable product year-in and year-out. Any suggestions for specific features here would merely be conjecture, but what StatCrew (and potential competitors) need to know is that the technological revolution is coming no matter what. Even a user interface facelift and some added features may not stem the tide of even more sophisticated software to calculate ever-increasingly

difficult statistics by a third-party developer. It's abundantly clear from the survey that whomever or whatever (be it StatCrew or some other entity) can capture the attention and respect of the consumer base, success will follow. All said entity will need to do is break the cycle.

The survey and study holds an immense amount of data about the people who use these programs, which could be used by many different entities – including StatCrew itself in order to see what their consumers are thinking. Future research in this area should include a qualitative assessment of the company itself (financial earnings, personnel, testers, etc.) that would help give a broader understanding of the industry. Future research should also attempt a comparative analysis against statistics software at lower levels of collegiate sports and the highly sophisticated setups used by professional leagues; a major limitation to this study.

There were specific and unavoidable limitations for this survey. First, the survey was sent to the highest-ranking member of each sports information office at each Division I institution in the country. That said, most directors have been employed in the business for a very long time and could potentially be out-of-touch on certain technological issues; many directors no longer have to use the software as much as their other employees – particularly at larger schools with larger offices. Additionally, many of these directors were most likely coming of age in the business when this technology was cutting-edge – a potential bias.

Another limitation was that it is possible that the individual university athletics email directories – where each email address was obtained – were out-of-date. The survey may have (and certainly did) fall on deaf ears or on email addresses no longer in use. Similarly, the demands of being a Division I SID – particularly at smaller schools – can be overwhelming at times, meaning taking the time for a survey is potentially out of the question.

That said, exceeding the target response rate was a pleasant surprise, as was the reaction from survey participants following. Several participants expressed interest in seeing results of the survey once complete, and several more were excited that a survey on an integral part of their job was finally taking place. That in and of itself should be telling of the conditions within this loose monopoly, for either StatCrew to remedy or for another to take advantage of.

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Research Paper Title:
The StatCrew Monopoly and Customer Satisfaction

Major Professor: Dr. Narayanan Iyer