

ITSO...Good

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A LITTLE CODE GOES A LONG WAY

"I have no idea what's wrong with it. But I need it to work. Like, now. Call IT for me."

Working at a financial institution, you're bound to hear statements like this... frequently. I can attest to this from personal experience. At the investment bank I interned at this past summer, the IT Help Desk was on speed dial; in fact, the button was programmed into every single phone. When something didn't work, you didn't mess with it, you called the help desk. This is expected, though, because finance people don't know technology, right?

Wrong. At least it's proving to be wide of the mark. Basic knowledge of IT systems is becoming increasingly mandatory for every industry, finance included. Corporate financial institutions that have traditionally used Excel models for forecasting, benchmarking, and budgeting have more recently added built-in macros that increase efficiency for individuals in positions that range from the most back-of-office all the way up to senior management. And behind every good macro is VBA code! VBA stands for Visual Basic Applications, a deployment of Microsoft's Visual Basic, a programming language driven by sequential event iterations. In VBA, the user defines the functions and automates the processes, meaning company-specific strategies can be reflected through VBA's various data operations.



While the VBA code needed for a few generic macros may seem basic to a technology-whiz, finance professionals tend to consider it foreign and therefore, in many cases, have minimal patience when something, somewhere doesn't work. This proves the growing popularity behind the notion that a little coding can go a long way.

Armintas Sinkevicius, a Marquette University alumnus presently employed by Morgan Stanley in New York, supported this idea, saying: "From my perspective, learning how to code VBA inside Excel would be useful for finance students in creating macros. One way to get ahead would be to create a tool that would analyze various indicators and trends, and could be rerun at any given moment." Sinkevicius also referenced the use of other technology in his previous position in the tax group at PricewaterhouseCoopers. "We worked on a program that utilized SQL and Microsoft Access to process vast amounts of data, simulate different scenarios, and prepare reports. As one of the few with knowledge of SQL, I became the point contact person for the group within just months at

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- Follow @MUITSO on Twitter

CODING, CONT.

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the firm.” As he points out, this can have its benefits, but with so many people in the field uninformed on technicalities, becoming the “tech guy” on your team can also bog your time or unnecessarily shift your focus.

JJ Foley, also a Marquette alumnus and a member of GE’s Corporate Audit Staff (CAS), would agree. “In corporate finance, understanding how to think like a coder or system itself has many benefits that lead to higher efficiency,” he told me. “In the last few years, I have been part of system integrations from the functional ownership side, and having the ability to speak intelligently to the IT consultants drives the project to new levels of opportunity.” Foley said he wishes he knew more VBA coding, and emphasizes the importance of SQL in accounting functions. But you can’t use such technology where unnecessary, he warned: “Knowing when and where to use what tools is as important—if not more important—than the details of the programs themselves.”



Corporate banking isn’t the only finance-sector job seeking IT advancement, as many money managers and investment banks—whether boutique or bulge-bracket—look to run technology operations in-house for personalized flexibility. Increased government regulation and the need for immediate internal feedback have created the demand for easy accessibility, which is another reason firms like to make tech proprietary when possible. Trading, too, is highly automated, with electronic trading replacing traditional floor trading globally, as I wrote about in my March 2011 article, High FREAKquency. We can’t forget cost. Why outsource, let alone offshore, if you can hire technology professionals

onto your own payroll to have sit alongside you and learn other aspects of the company at the same time? In our current economy, this is a question being asked by technology leaders every day.

Dr. David Krause, professor of Finance at Marquette and director of the Applied Investment Management program calls attention to the use of extensible Business Reporting Language, or XBRL, as a crucial indicator of technology’s influence in the financial sector. As of February 2009, the Securities Exchange Commission (SEC) requires that companies provide their financial statements in XBRL format, allowing for

easier comparison of statements and the well-received ability to “Ctrl + F” within a statement to find exactly what you’re looking for. XBRL has since become the global standard for business information exchange.

Dr. Krause said: “With the SEC’s rollout of the XBRL reporting requirement, their Electronic Data Gathering, Analysis, and Retrieval (EDGAR) system will be even more useful to investors who evaluate firms’ financial statements. Data posted in XBRL allows for more detailed screening and filtering of key measurements.” Krause believes that as a result, capital markets will become more efficient. Efficiency is a topic frequently referenced in discussion of technology’s influence the finance world. “With the ability to easily access tagged data points, cross-sectional financial analysis will be accessible to more analysts – not

“Why outsource, let alone offshore, if you can hire technology professionals onto your own payroll to have sit alongside you and learn other aspects of the company at the same time?”

just those in firms with massive IT budgets,” he told me.

So what has all of this led to? For those who picked up on the trend early enough, it’s

meant a double major in Finance and Information Technology. My fellow Finance & IT major and eBoard member Shane Duffy said of the topic: “My

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$$\text{Call Option} = SN(d_1) - Xe^{-rT} N(d_2)$$

Where:

$$d_1 = \frac{\ln\left(\frac{S}{X}\right) + \left(r + \frac{\sigma^2}{2}\right)T}{\sigma\sqrt{T}}$$

$$d_2 = d_1 - \sigma\sqrt{T}$$

```
Function call_Eur(S, X, t, r, sigma)
    Dim dOne, dTwo, normDOne, normDTwo
    dOne = ((Log(S/X) + (r + 0.5*sigma^2) * t)) / (sigma * t^0.5)
    dTwo = dOne - (sigma * t^0.5)
    normDOne = Application.NormSDist(DOne)
    normDTwo = Application.NormSDist(DTwo)
    call_Eur = (S * normDOne) - (X * Exp(-r * t) * normDTwo)
End Function
```

SOCIAL MEDIA CHOOSES GROWTH OVER SECURITY

In a year dominated by social media unlike any prior, the Federal Trade Commission finally placed some reigns on social media poster boy Facebook, mandating two decades of privacy audits designed to protect users' personal information. Facebook had come under fire for failing to adequately inform users of drastic changes to its privacy practices. "Facebook's innovation does not have to come at the expense of consumer privacy," said FTC Chairman Jon Leibowitz in an FTC statement. "The FTC action will ensure it will not." The sanctions come only days after Facebook announced its intentions for an initial public offering in 2012. Facebook intends to raise over \$10 billion, which would value the social networking giant at over \$100 billion. Facebook is not the first Internet site to have a run-in with the FTC over privacy concerns. Both Google and Twitter reached a similar settlement in 2010 that requires biannual privacy audits.



At the heart of the FTC-mandated privacy audits is the fact that, like most of the Internet IPOs, Facebook relies virtually exclusively on advertising revenue – an inherent conflict of interests as it pertains to users' personal information. The third-party audits will likely prove to be costly. In addition to footing the bill for the audits, Forbes reports that violations could reach up to \$16,000 per violation per day. In addition to the audits, the FTC expects these three sites to beef up their other privacy programs. In late November, Twitter announced the acquisition of security startup Whisper Systems, which Twitter states will be key in improving security and privacy over mobile devices.

Facebook CEO Mark Zuckerberg announced in the wake of the rulings that Facebook would add a pair of chief privacy officers: one will focus on privacy policy, whereas the other will oversee privacy of new products. The positions aim to protect Facebook from future clashes with legislators, while holding its place as a leading innovator on the social media scene. Facebook's success can be largely attributed to third party application companies such as Zynga which produces of games such as Words with Friends and Farmville. Zynga is preparing for its own IPO. The third party applications are one of the sources of the breach and will be at the center of attention of the privacy audits of Facebook, Google, and Twitter.

Also on the radar, however, will be new facial recognition applications sported by both Facebook and Google. Goggle's "Find My Face" application can be utilized with its new social networking site, Google+, in much the same way as Facebook's Photo Tag Suggest and will match new photos with those already tagged in a users' profile. Google's tool requires users to opt in before use, unlike Facebook's facial recognition application. Facebook turns on the feature by default, but recently began allowing users to opt out after early criticism. The privacy audits will look at how Facebook utilizes the information of its users, both internally and its disclosures to outside marketers.

What is a privacy audit?

Privacy audits closely parallel security audits that are designed to prevent unauthorized access to the company's information, but it is more comprehensive in that it also covers the company's internal use of personal private information (PPI) and its authorized disclosure to other parties.

ISACA, a professional organization that focuses on IT governance, states that privacy audits in the modern age are generally performed by IT auditors given that the



information is digital and thus subject to IT controls. In conjunction with ISACA and the Canadian Institute of Chartered Accountants, the American Institute of Certified Public Accountants issued Generally Accepted Privacy Principles (GAPP), which provide a framework for privacy at the management level, as well as controls over information use, retention, disposal and disclosure to third parties.

The privacy audits of Facebook, Twitter, and Google must be performed by a third party, but the FTC does not provide a list of firms that can provide a suitable audit. However, many multinational accounting and consulting firms provide IT-oriented audits. One of these firms will likely be among the candidates to provide the privacy audit services. While the privacy audits will likely promote consumer confidence that their information

is being used securely and responsibly, the results of the violations that led here will likely not rest lightly with legislators. The European Union is considering stricter sanctions that would place a severe damper on Facebook's ability to attract marketers in European markets.

There is likely no stopping the momentum that Google, Twitter, and Facebook have generated towards the future. In that pursuit, however, regulators are doing everything in their power to protect the users who make social media the incredible growth engine it has become.

"The privacy audits will look at how Facebook utilizes the information of its users, both internally and its disclosures to outside marketers."

-Justin Stanaszak, ITSO Editor

WHAT'S APP-ENING AT MARQUETTE?

"There's an app for that" This tagline made famous in Apple's iPhone commercials can now be seen in comic strips, on sitcoms and in everyday conversation. Developers across the globe have helped this tagline ring true – you really can do almost all of your daily tasks on a smartphone. From social media, to banking, to mobile cards, these applications have simplified many lives. Although they are utilized by people of all ages, it can be argued that the high school and college age students are a primary demographic for these apps. Whether negative or positive, it seems we are always on our phones searching for something or passing the time.

Despite the many apps Marquette students use while shopping, searching, dining, waiting for class to begin, or maybe even during class, we have a hole in our app arsenal. It may go unnoticed by some, but as with many mobile applications, once it is created students will wonder how they ever lived without it. The app I am imagining would serve both students and faculty



of Marquette University. It could offer access to class schedules, dining options, game times, and on-campus special events. In addition to raising awareness of campus activities, it would also add a simple convenience to the lives of many students.

Columbia Business School in New York recently released an iPhone app of their own to enhance the students' academic experience. It includes directories, maps, course listings, and club activities. Students are also able to receive safety alerts and course material information from one, easy-to-use location. Students at Stanford University embraced the app trend in 2009 by creating a unique tool for their community. With the iStanford app, users are able to track locations and message friends who are also using an iPhone. Many other universities have followed suit, tailoring each app to the students' specific needs.

Who better to create a mobile application dedicated to Marquette University than the student users themselves? Mobile experience is highly sought after in the workplace and this applied-learning project would be a great way to build a relevant skill set. An interdisciplinary team of graphic designers, computer scientists, and business students would have all of the skills necessary to create a dynamic application. Whether lead through Marquette Universi-



ty Student Government, a class project, or a special interest group, the primary users of this app should be involved in its creation. Ownership of the app by a particular group would be important to ensure proper updates and maintenance.

The creation of a Marquette app seems to be a large task to tackle, but with the wide knowledge base of our students and faculty, I know it would be possible. The benefits are innumerable and the learning experience would be unmatched. Plus, it would be great to hear the answer to any Marquette student's question as, "there's an app for that."

-Maggie Morris, ITSO Co-President

There's an **app** for that!

COMING SOON IN SPRING: JAVA AND JOBS 2012



"The breakfast brings about a more casual atmosphere so that students and employees are left to a friendlier environment in order to get to know one another."

Please contact Colleen or Maggie for more information about this recruiting and networking event for IT students seeking internships and full time positions.

'TIS THE SEASON OF GIVING

As we quickly approach the Christmas holiday, we hear the jingle 'tis the season' reminding us to spread Christmas cheer, celebrate one another, and give back. As a student, it can certainly be difficult to make this a priority amidst a stressful week of final exams, papers, and projects. However, through the completion of our final projects, introductory IT students can say that we have done our part. We can enjoy our holiday break, conscious that our contributions helped several grateful organizations.

Throughout the semester, we have been working with local organizations to create and implement working databases. These projects have been a semester-long process, challenging us to apply concepts learned in class to the real world. Such a challenge perfectly aligns with a core aspect of Marquette's curriculum, because it forces students to go beyond simply mastering class material. We took what we learned in class each day and applied it to the real world, tackling and addressing business problems. These problems required us to contact and establish relationships with organization coordinators, delve into the organization's needs and requirements, and then plan a feasible and appropriate information system solution. The benefits of this project and process were not one-sided; as we worked to help organizations improve their information systems, the organizations simultaneously helped us. Through applying concepts

from class to our projects, we truly mastered data flow diagrams, ER diagrams, queries, and reports.

Five different organizations benefitted from this process: the Council of Alcohol and Other Drug Abuse, Citizens and Organizations Active in Disaster, Mental Health America of Wisconsin, Pan-African Community Association, and Redeemer Lutheran Church. Located in different areas of the state with different needs and concerns, the tie that bound these organizations together was a desire to improve internal processes so that a greater percentage of time could be spent helping clients. We were happy to oblige despite the fact that we knew little more than they did. Looking back on that initial meeting, Alexandra Coello's choice of words is most appropriate, "[It] was daunting." In our attempts to provide a functioning database, we had the opportunity to connect with some wonderful people who do truly noble work through their respective non-profit organizations. As we started to gain a firmer grasp of IT concepts and how they would impact the lives of these individuals, we were able to impart that knowledge. The stories below will give two examples of the projects completed this year.

The Pan-African Community Association is a non-profit working to aid refugees in their transition from African countries to life in Milwaukee. With almost no knowledge of IT, we sat across the table from coordinators Christiana and Quin'tara

at the first meeting as they detailed the issues they experienced with their current system. It boiled down to a simple request – make a database capable of tracking donations (financial and monetary) coming into the organization. With that bit of information, we went to the drawing board and attempted to determine everything needed to give these coordinators a comprehensive system that could grow with the organization. We attempted to construct data flow diagrams and ER diagrams that properly conveyed the thoughts in our heads; however there always seemed to be a disconnect between those thoughts and what actually ended up on paper. Meanwhile, we continued to reassure our clients that we were making progress. That was not a lie; however the process was far slower than any of us could have anticipated. Once we had everything on paper, database construction began. Relationships were designed and scrapped and forms were developed, modified and deleted. After iteration number 52 was completed, we sighed in relief knowing that it was complete, and more importantly that our clients would receive something that had been tailored specifically to their needs. And then it hit us. PACA would receive a donation tracking system, and we created it.

Redeemer Lutheran Church, as stated by their mission statement, is a community of disciples worshipping God in spirit and truth

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WHAT MAKES IT SO PINTERESTING?

"Look at these cupcakes that Mary pinned on her recipe board this morning."

One of the newest players in the online startup scene, Pinterest allows users to browse images and bookmark them or "pin" them into groups called "pinboards." Trendy lingo is one tactic that social media ventures utilize to disseminate into the mainstream and it has not taken much time for jargon such as "tweet," "post," and "tag," to integrate into everyday vocabulary. Now "pinning" has become just as popular. So gone are the days of corkboards, bulletins, and collages of cutout magazine pictures of dream wedding dresses or travel destinations, as now an inspiring image can be "pinned" to a virtual collection with the click of a mouse. Over the past year, Pinterest has become a fad amongst Midwest females – certainly not a population demographic that typical adopts Silicon Valley projects - but the simple and visually appealing layout facilitates the organization of images and videos on the World Wide Web and emphasizes categories such as recipes, style, travel, event planning, and gifts.

So what's all the hype?

Given its interactive atmosphere and simplicity, Pinterest has registered over 3 million users since its Beta launch just over one year ago. Creating an exclusive feel, new members need an email invite to join the site, and then have the option of automatically linking their new profile to Twitter or Facebook so signing up takes minimal effort. Pinterest connects people across the web based on common hobbies and tastes, cultivating a social world based on idea sharing and collaboration. Users are attracted to visually appealing images appealing and therefore, avoid flipping through magazines or reading full articles. Plus, the grid layout makes scrolling through the virtual bulletin board easy and familiar to other social networking sites. With the mobile app, people can upload their own ideas to the site on the go or images can be "repined" to your own collection from another users' board. However, Pinterest always saves the original website address of the image.

After initially hearing about the new fad, I

started asking my friends their honest opinions. The most common responses: "addicted," "obsessed" and "flipping love." Women become hooked on the site, discovering craft ideas, building new outfits, and sharing fun recipes, party plans, and thrifty home décor. The site empowers the average person to feel artsy and hip without any significant creative or innovative exertion. It is easy, yet addictive and time-consuming to follow edgy designers, add your own spin to their ideas, and create an artistic façade. However, Pinterest designer, Evan Sharp claims, "there are all sorts of life tips that come out of Pinterest... what that means is that, at the end of the day, Pinterest can really complement your life instead of being a timesuck."

I beg to differ. I left my Pinterest invitation untouched in my inbox for several weeks to avoid another temptation that would keep me from practical and productive activities. I was nervous that Pinterest would draw me away from studying, working, and making my own adventures. Is it another reason for me to waste an extra 30 minutes each day in the virtual world of the web instead of real life? Maybe, I am falling behind when I stick with my old school bulletin boards instead of participating on Pinterest. But in a way it is thrilling to escape from an inevitable source of procrastination.



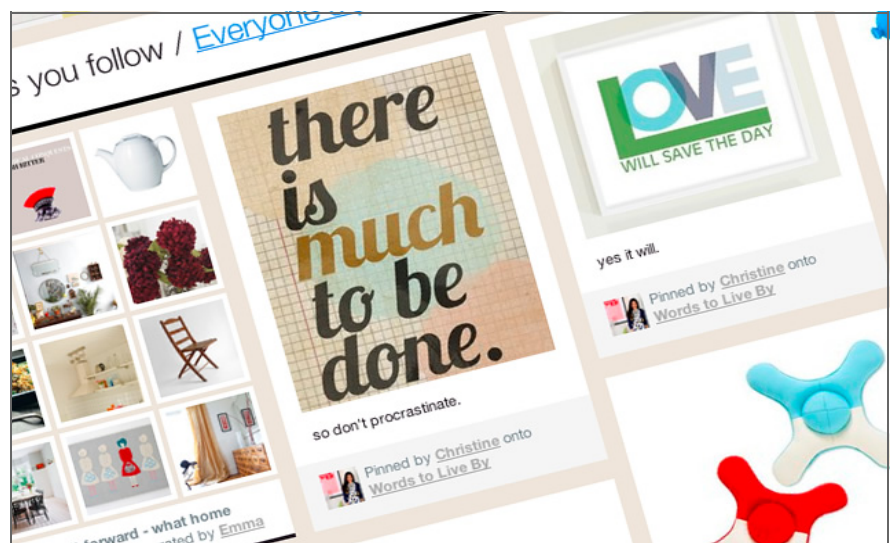
**duh.
pinning.**

Pinterest

In addition, there is a concern for the privacy of the site. Currently, there are no settings to create a board that is restricted or private from the entire web. That could get sticky when building a "gift ideas pinboard" or as one blogger observed, is Pinterest "merely self-expression or are we just spending hours packaging ourselves for marketing agencies?" Pinterest has a unique advantage as it targets the discovery phase of consumer behavior and provides companies with a solid insight into our tastes, dislikes, and activities.

At this point, it seems there is no stopping the power of Pinterest. Time Magazine named it one of The 50 Best Websites of 2011, indicating that with my apprehensions, I represent a minority of the population. Around the holiday season, Pinterest will enjoy extra traffic as women connect with their inner artist, cooking festive dishes, choosing gifts, and decorating their homes. So here's to you modern crafters ... cheers to all ideas you find Pinteresting!

- Elise Chapman, ITSO Chief Editor



'TIS THE SEASON, CONT.

(Continued from page 5)

and serving others in love and faithfulness. In September, our IT group walked up Wisconsin Avenue to the red church on 19th Street to conduct our first meeting with Pastor Lisa Bates-Froiland, coordinator of the mapping project. Lisa's goal through the mapping project was to map the surrounding 68 blocks of the community to gain a better understanding of the community's needs, concerns, and skills. After explaining the project, Lisa showed us an unorganized red binder, filled with notes and maps. These hand-written notes and maps - scattered, inconsistent, and far from user friendly - were the notes Lisa had gathered while mapping the community. It was our duty to convert this binder into an organized and functional database. We had our work cut out for us. Throughout the course of the semester, we worked with Lisa to brainstorm different functions that the database would serve. Since Lisa didn't have an explicit set of requirements for the system, discretion was largely left to our

group to create an efficient and user-friendly database that would meet the needs of the mapping project. After many long and draining nights spent in the computer lab, our group deemed our database complete. With pride and a sense of great satisfaction and accomplishment, we presented our database to Lisa. In an email to me she expressed her gratitude, "Thanks very, very much for your work on this project. I mention you with praise every time I talk about the Mapping Project." Knowing I helped create something Redeemer will use to better its operations is incredibly fulfilling and gratifying. Dr. Ow was not kidding when he said that this project would consume your life. However, he also was not wrong in saying that once done; you would feel on top of the world.

The coordinators at PACA and at Redeemer Lutheran Church represent dozens of individuals that have been aided by service

learning projects such as the one required of Dr. Ow's IT students. These projects are challenging. For most of us, it was the first time that an assignment had implications beyond a grade. This project teaches IT skills, but more importantly, it gives students

"What really mattered were the coordinators' reactions. Those reactions were more satisfying than any grade could possibly be."

an opportunity to understand IT in practice. We agonized over scheduling meetings, fulfilling our clients' wishes and meeting specified deadlines. By the time it was all over, the grade was an afterthought. What really mattered were the coordinators' reactions. Those reactions were more satisfying than any grade could possibly be.

*-Katherine Kermmerer and
Courtney Bohman*

CODING, CONT.

(Continued from page 2)

second major was originally going to be in Economics. Once I learned more about the synergies between Finance and IT, I knew I had to trade it in. I now have some coding skills to sync with my background in Finance, which I feel the industry is looking for." As Duffy and many others have realized, the Finance and IT combination makes someone much more marketable than having one of the two alone. It's a little known secret that the coding languages on the "skills" portion of your resume get some serious attention.

For those with other majors, taking a coding class as an elective is a good idea, as knowing the fundamentals puts you at an advantage over most. Dr. Krause stated, "I believe that courses in statistics and IT are important, as they help finance students learn how to solve equations in complex financial markets. They help with decision-making, modeling, and allow them to

better draw conclusions when differentiating between firms and investments."

For those who don't have access to classes or much time to work with, websites have emerged that teach the basics of software coding. Codecademy.com is a startup that allows people to take interactive coding lessons via the web for no cost. Launched in early 2011, the website already has more than 1 million users and over \$2.5 million in funding from investors. "Coding is going to be the literacy of the 21st century, we think," said Codecademy co-founder Zach Sims in an interview with CNN Money.

While there is undoubtedly a group of people who have no interest in learning something as tedious as coding, even the smallest interest should be capitalized on due to

demand for technical literacy at global organizations. There's also a lot more to technology than applications programming, so understanding some aspect of its role in a different industry can be extremely beneficial. And if nothing else, it just may save you a call to the help desk.

-Colleen Osborne, ITSO Co-President

systems analyst,
business analyst,
programmer, desktop
support, technology
risk consultant,
systems and process
assurance, information
technology audit,
information
management
leadership program,
project leader, network
manager.



JAVA & JOBS 2012

FEBRUARY 14, 2012
8:00-10:00 AM.
AMU BALLROOM
MARQUETTE ALUMNI UNION
CONTACT COLLEEN OR MAGGIE FOR MORE INFORMATION



This networking event will bring together IT employers from the area to give you the chance to meet and greet potential employers in your search for an internship or full time job. If you are interested in attending, please contact Colleen.Osborne@mu.edu or Margaret.Morris@mu.edu for more information

ANNOUNCEMENTS

Upcoming Events:



February 14
Contact Colleen or Maggie for more information

February 25
Ronald McDonald House
Wauwatosa, Contact
shane.duffy@mu.edu



Suggestions:

Do you have any ideas for articles you would like to see in ITSO Good? Write to elise.chapman@mu.edu



Recruiting Zone:

This space is available for job or internship postings. Please contact joseph.zaksheske@marquette.edu for more information.



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