



**Book Dynamics:  
Understanding a Changing Market**

**A White Paper by:  
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**WhatTheyThink?**

# Book Dynamics: Understanding a Changing Market

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## Introduction

Like many print segments in a world rapidly going digital, the book market has undergone tremendous upheaval over the past few years. Book publishers struggle to deal with declining sales of printed books across most categories while they continue to refine their e-book strategies. Book printers are looking for ways to more quickly and profitably produce shorter runs of books—either on demand to fill a specific order, or in a print-on-demand model with runs of 50 to 1,000+ units to reduce inventory costs.

This white paper presents a look at the current state of the book market along with a discussion of how technology can be applied to meet the challenges facing both book publishers and book printers. It features tips and techniques for profitably producing printed books in runs as short as one that will be helpful to both printers and publishers as they plan the future of their businesses.

## A Changing Book Market

According to recent research conducted by INTERQUEST<sup>1</sup>, the total volume of books printed in North America is projected to decline 4% to 5% annually over the next several years. INTERQUEST cites the sluggish economic climate and the growing impact of e-books as the primary causals. The research further states, “Conventionally produced books will decline at a rate of 8% per year, while digitally printed volumes [will] grow 21.7% annually. Digital book production will be fueled by continuing efforts by publishers to reduce supply chain costs, a new generation of faster and more productive inkjet presses, B-size sheet-fed digital presses, self-publishing, and distributed manufacturing. Digital manufacturing, which currently accounts for about 7% of all printed books, will increase its share to 22% by 2017.”

The Book Industry Study Group (BISG), in its *BookStats Volume Three (2013)*,<sup>2</sup> adds that the U.S. market for books measured in net publisher sales declined only 1% from \$27.4 billion in 2011 to \$27.1 billion in 2012, likely influenced by the decline in printed pages and the often lower sale price of e-books. This decline leveled off from the previous year, where net revenues fell 3% from 2010 to 2011. This leveling off could signify that declining print revenues are being offset somewhat by ebook revenues. According to *BookStats*, even with the revenue decline in 2012, the number of books sold increased by 200 million units when compared to 2011.

## Market Segments

The book publishing industry is generally categorized into three segments, each of which will be briefly addressed here.

**Trade:** Trade publishing continues to gain share of publishing industry net sales, according to *BookStats, Volume Three*, comprising 55% of U.S. publishing net revenue in 2012 with an 8% growth over the past three years. Trade publishing includes adult, juvenile and religious books.

**Education (K-12 and Higher Ed):** Education publishing continues to decline. K-12 and Higher Ed course materials represented 32% of total U.S. publishing revenues in 2012, dropping from a 36% share in 2010 according to *BookStats, Volume Three*. Growth in this segment has been eroded by declines in State & Federal funding and declines in

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<sup>1</sup> *Digital Book Printing: Market Analysis and Forecast, 2012-2017*, INTERQUEST, Ltd., September 2012.

<sup>2</sup> *An Annual Comprehensive Study of the U.S. Publishing Industry*, BookStats Volume 3 Featuring Data for Calendar Year 2012, a joint reporting venture between the Association of American Publishers and the Book Industry Study Group.

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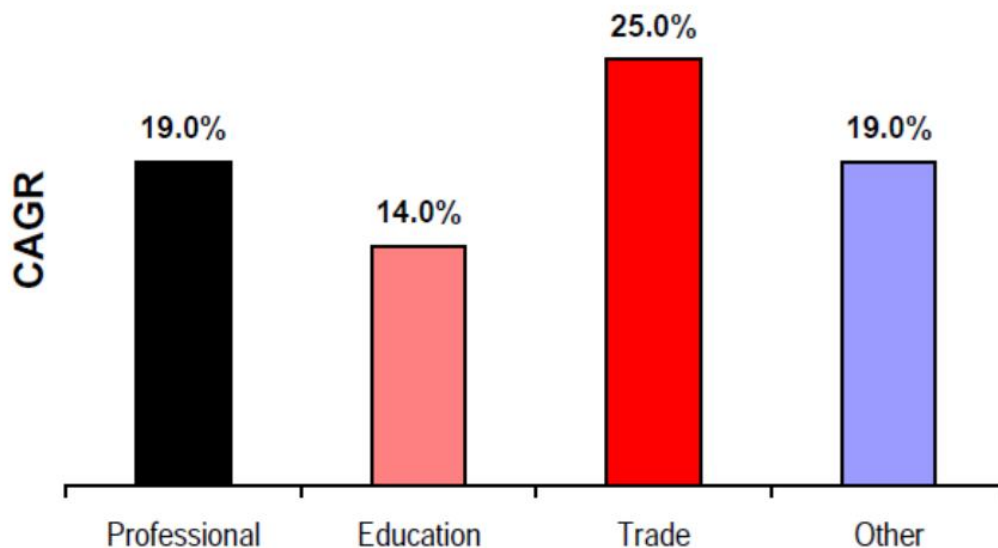
enrollment in colleges and universities in an unstable economy. Educational publishing is also affected by the e-book revolution, for both textbooks and supplementary course materials. Especially in higher education, growing use of Learning Management Systems and online education is one factor that we believe is driving a transition to digital, versus printed, materials.

**Professional and Scholarly:** BookStats reports that the professional sector, which includes legal, medical, technical and business resources, is also in decline, with 2012 revenues down 3% from 2011 and 8% from 2010. There has been an ongoing decline in library budgets that has affected demand for printed materials, combined with rising journal prices and the move to non-printed formats. As is pointed out in *BookStats, Volume Three*, "... content of this type can often be organized and served more effectively in bits and pieces rather than in the relatively static form of a traditional book."

One thing is certain, though: all three segments could benefit from a more efficient supply chain and the resulting reduction in overall costs, spelling an opportunity for manufacturers of short-run and on-demand books to offer their services in order to help publishers meet these objectives.

## Short-Run Book Opportunities

The INTERQUEST forecast for total volume of impressions printed on digital equipment for book production is good news for manufacturers of short-run books. It reflects growth from about 49 billion in 2012 to 117 billion in 2017, a growth rate that should catch the interest of both printers and publishers of books. Figure 1 below breaks that growth out by segment, with trade books experiencing the highest growth rate.



Source: INTERQUEST

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According to a report published by Caslon & Company<sup>3</sup> in May of 2013, books represent about 13% of all digital print images in North America. The only applications generating more digital volume than books are transactional (28%) and direct mail (18%). Manuals and course packs still comprise 11% of North American digital print images.

## Less Reading

Another contributor to the decline in book pages and revenue is the fact that U.S. households are spending less on reading as a percentage of their household entertainment expenditures. Shockingly, according to Gallup and Pew Internet surveys, nearly 20% of U.S. adults have not read a book in the past year.

For those who are reading, several studies have reported that e-book reader owners tend to read more books than those who do not own e-readers. That, of course, is probably skewed by the fact that people who buy e-readers likely already have a propensity to read books.

## The e-Book Impact

Clearly, the stunning growth in the e-book arena has had an impact on the printed book market. There has been a proliferation of digital reading devices, ranging from Amazon's popular Kindle platform to tablets from Apple, Google and others. Improved screen resolution (and in some cases, larger screen size) for smart phones also makes these digital devices more comfortable for reading than past generations.

BISG, in BookStats 2012, reports that e-book sales grew more than 210% in 2011 in trade categories which comprises about 97% of all e-book sales. Estimates are that e-book revenues accounted for about 15% of U.S. trade revenue in 2011, a percentage that will only continue to grow.

Gartner reports that tablet sales, a category which now includes many of the e-reader platforms as e-reader capabilities have expanded, reached nearly 120 million worldwide in 2012. Gartner projects tablet sales to grow to 370 million by 2016. These numbers may be conservative in light of IDC's report of record-breaking tablet sales in the fourth quarter of 2012—more than 50 million tablets sold worldwide in that quarter alone. This includes about 7 million units between Amazon's Kindle Fire (6 million) and Barnes & Nobles' Nook (1 million). Owners of iPads and Android tablets not specifically dedicated to reading books are also likely to be significant consumers of e-books.

## Online versus Retail

Brick-and-mortar retail book sales in the U.S. have faced their fair share of challenges. Most notably, with Borders going out of business in 2011, 650 bookstores were closed and more than 10,000 employees lost their jobs. One could argue that much of the pressure on brick-and-mortar retailers comes from Amazon, with its availability of a huge library of titles, most of which are available in Kindle format; the convenience of, and often preference for, online purchasing of books; and Amazon's improved distribution channels, including Amazon Locker which allows buyers to pick up their purchases at a convenient locker site rather than waiting for delivery at their home or office. Amazon is also going into publishing in a big way, launching some of its own imprints and acquiring others.

## Self-Publishers

Many of these trends have made it much easier for authors to self-publish. This includes some well-known names who have abandoned traditional publishers for self-publishing, as well as a wide variety of less well-known, or even unknown,

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<sup>3</sup> Caslon PDP Market Segment Report, May 2013

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authors. Bowker, who issues ISBNs, reports that self-published titles with ISBNs grew 59% from 2010 to 2011, with conventional publishers seeing only a 6% growth in titles.

While self-publishing presents a challenge for book publishers, it also provides them with an opportunity to later pick up self-published authors who have demonstrated success on their own. For book printers, self-publishers offer a tremendous opportunity, especially if their services include assistance with design, marketing, distribution and fulfillment, and, of course, affordable production of short runs or even on-demand production as orders are received.

Firms such as Lightning Source, Lulu, Blurb, DiggyPOD, AdiBooks and Smashwords have established a range of services tuned specifically to self-publishers, and Amazon offers author services as well.

Especially in the self-publisher arena, book printers must be prepared to offer a certain level of handholding along with the ability to affordably print and distribute small quantities of books while still earning a reasonable margin.

## Backlists: A Thing of the Past

While on the surface, an overall decline in page volume for printed books sounds like bad news for the industry, in reality it isn't. Consider that traditionally, there is some 40% waste in the book supply chain. Much of this is due to the need to print higher volumes of books than may actually be needed in consideration of offset printing cost dynamics and supply chain logistics. For book publishers, one of the biggest business risks is forecasting how many printed units of a given book will sell. With traditional book manufacturing, forecasting too many results in huge costs of returned and remaindered books, while forecasting too few can put the book into out-of-print status too quickly, resulting in lost sales.

Now, with the ability to print books on demand and in affordable short runs, publishers are able to test the market and quickly fill shortfalls with digitally printed books while longer offset runs are being processed for those books with higher levels of demand. In a print-on-demand world, backlists should be a thing of the past, and a book should never be "out of print" ... with effective short-run and on-demand digital print manufacturing techniques, publishers can fill orders literally within hours of when they are received. This is especially valuable for books ordered online, where minor delays in manufacturing and shipping are virtually transparent to the purchaser. In this scenario, a consumer may order a book online, and if there is no inventory, it will be printed often as quickly as within 24 hours of the order being placed. With drop shipment to the consumer by the book printer, the consumer never knows—or cares—that the book was printed just for her. The book printer, publisher and author all benefit from revenue that might otherwise have been lost. And the consumer is happy to get her book quickly, not having to wait months for a reprint. While the unit cost of manufacturing and shipping might be a little higher than books printed and shipped in offset quantities, the overall supply chain cost is reduced by as much as 40% because there is no waste in the process.

## Meeting the Challenge

Digital printing technology for book printing has seen a number of advances, most notably, a rise in the availability of high-end production inkjet presses. These presses offer the benefit of virtually no makeready, very high throughput, 24/7 durability and the ability to print both monochrome and color. Previously, high volume digital book printers were primarily using roll-fed monochrome electrophotographic presses. INTERQUEST reports that about half of the book printers interviewed for its 2013 study now have production inkjet presses, compared to less than one-third the

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previous year. Color content in digitally printed books has climbed from a mere 2% in 2004 to 20% in 2012. This is likely due to the increased convenience and decreased cost associated with digital color inkjet printing and the ability to print color in a single pass without the need to marry color and black & white pages in the finishing process.

Covers are still printed separately, typically with electrophotographic color digital presses. This is due to the need for heavier stocks and higher quality, as well as much lower page counts, as compared to book blocks.

## More Than the Press

Book printers must be cognizant of the productivity of the entire workflow when constructing a digital print book manufacturing platform. This becomes even more critical as the number of jobs grows while the value of each job decreases. While presses are a critical element, of course, the workflow surrounding the presses is arguably even more important.

### Order Entry

Authors or publishers should be able to upload books to a digital library. Once books are in the digital library, it should be easy to order books in specified quantities. Depending upon the production platform the book printer has in place, including partnerships with other printing plants, authors or publishers should be able to order books in quantities of one to thousands. Digital-only book printers may wish to limit the number of units that can be ordered at the top end; however, in an ideal world, they will have partnerships with offset printers for production of these higher volumes.

To the extent this web interface can be integrated with publisher systems, author e-commerce web sites or other systems that allow consumers and others to order books online, book printers will benefit from a larger volume of orders flowing into the plant. Content owners will benefit from a streamlined user interface that allows them to address all of their book printing needs from one system.

Digital book printers may also wish to consider offering e-book services, including conversion of books to various e-book formats and the e-commerce systems associated with their purchase and distribution.

### Preflight

Before book files are officially placed in the digital library, they should be preflighted to ensure that they will print correctly. To the extent that preflight can be integrated into the order submission process, the book printer and the content owner will both benefit from added efficiency. Most file errors tend to be associated with images (wrong resolution), color space (RGB versus CMYK) and fonts (missing). These can more easily be corrected at the point of content creation.

Especially with self-publishers, book printers are likely to need an additional manual proofing/review step to ensure that the book will print as expected.

### Proofing

Traditionally, printed galleys have been provided by the printer to content owners for final proofing. With digital printing, it is possible to provide a printed book, as it will look as a finished product. Alternatively, the proofing cycle can be done with digital files, either in e-book format or PDF. Either way, most book printers will likely prefer to have the

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content owner review a final printed proof prior to putting the book into the digital library to eliminate liability and potential rework.

## Production

Depending on the printing technology used, the production step should be as automated as possible. Once an order is processed through the digital library, the prepared file should be sent directly to the press (or platemaker, in the case of offset printed books). Use of barcodes for matching covers and book blocks is a must. Good color management is also important for production of covers and any color content within the book block.

## Finishing

Traditionally, book binding has primarily been an offline process. In today's digital print world, there are inline solutions available which may be appropriate for certain manufacturing models. This could be especially helpful when creating proofs or very short runs and when formats are limited. In most cases, however, book printers find nearline finishing more efficient, either in a sheetfed or roll-to-roll workflow. Finishing technologies should include stitching for booklets and perfect binding at a minimum. There are also automated case binding solutions available as well, for book printers who wish to include case-bound books in their portfolio of offerings.

## Billing and Shipping

This is an area that can cause undue grief for book printing businesses, especially those who are making the transition from long runs to short runs or print on demand. To the extent touches can be taken out of this process, administrative costs will be lower and margins higher.

Shipping information should be included in the production system at the time of order entry, with shipping documents automatically generated at the point of shipment without the need for manual entry of information by shipping clerks. Invoices, when required should be automatically generated as well, for inclusion with the shipment or for separate mailing if the consignee is not the same as the payer. Ideally, of course, short-run or one-off books should be paid for in advance via credit card or included in a periodic invoice to larger publishers.

## Workflow

As the observations above suggest, digital book printers should have an end-to-end automated workflow in place. Manual intervention should be by exception only, and possibly as an extra billable service for self-publishers. In cases where a single workflow solution does not cover all of the bases, book printers should look for ways to close the gaps and remove manual steps. Press and finishing vendors can often be a good source of information and advice relative to building an automated book factory.

## Book of One

Many digital book printers report that their average unit run length is in the single digits. Producing small quantities, as small as one, can be a challenge for many workflows. All indicators are that producing small quantities on demand is likely to become the rule rather than the exception as the book market continues to evolve.

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Some printers choose to streamline their manufacturing process by limiting the formats for books they print. For example, a printer may optimize workflow by allowing only 6x9" and 8.5x11" formats. However, this could lead to lost business or workflow inefficiencies for small quantities of off sizes. Ideally, book printers should be able to handle a wide range of sizes, and in fact, any size specified by a content owner with the exception of larger formats that may be precluded due to sheet size or web width of printing presses, or format restrictions in the finishing line.

One way to address this issue is to seek a turnkey automated book factory solution that is designed to profitably address book manufacturing in quantities of one. One such system from Canon Solutions America is profiled here as an example.

## The Details

**Book of One** from Canon Solutions America is a turnkey solution comprised of Canon hardware and software together with partner finishing products. It is a complete book imposition, print, cut/stack perfect bind and trimming solution. It also has the ability to easily integrate with front- and back-end portions of the book manufacturing business to address most, if not all, of the issues raised in this white paper.

At the heart of **Book of One** is Canon's on-demand publishing tool that is part of Océ PRISMAproduction, a workflow solution from Canon Solutions America that:

- Drives any production printer with unlimited performance
- Performs and automates prepress and spooling tasks
- Defines highly effective workflows to automate production processes
- Controls production across multiple sites
- Delivers a high level of production reliability.

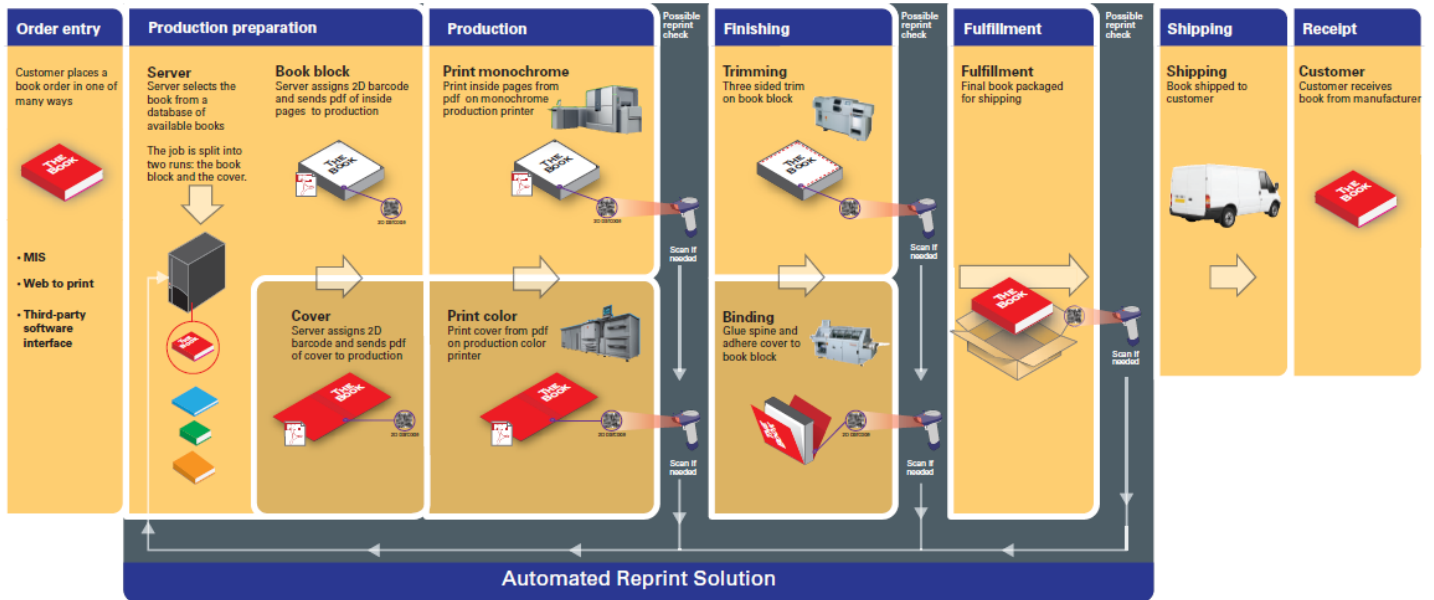
It consists of four modules:

- **Input:** Allows definition of automated input workflow. This means that files can be submitted via just about any method and automatically placed in an intelligent book printing workflow.
- **Prepress:** The Prepress module includes PDF preflighting and reporting as well as professional imposition for publishing environments. A unique aspect of this module is the **Book of One** imposition capability that allows books of various sizes and quantities to be intelligently imposed for efficient short-run book manufacturing.
- **Management:** Drive all production devices from a single interface, regardless of manufacturer and across multiple sites. It includes solutions for ink use estimation that are a critical element of accurately estimate work digitally printed in production inkjet presses.
- **Workflow:** Define intelligent workflows that automate book manufacturing. Take advantage of PRISMAproduction's open API to integrate into third party applications, such as order entry, MIS, accounting and shipping.



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The basics of **Book of One** are depicted in the figure below.

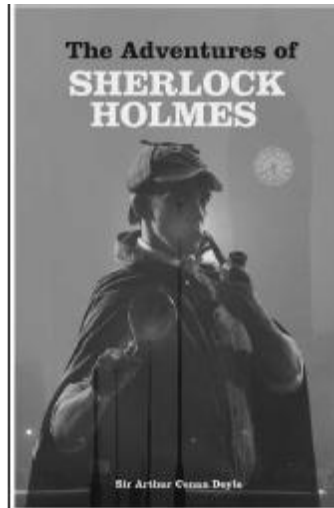


Important advantages for profitable and automated manufacturing of short run books include the Print File Enhancer capability, which allows operators to enhance and/or modify PDF files. This function enables placement of barcodes for tracking page count and marrying covers with book blocks as well as the ability to insert pages or shift contents to allow for gutters and other factors. With book of one, book printers can also insert barcodes on the fly or during the preflighting and imposition process.

One of the most unique aspects of **Book of One** is its ability to impose multiple titles on a single sheet or web width, even when those titles are being manufactured in different form factors. The figure below provides a sample sheet/web layout for a **Book of One** imposition of four different titles.

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When combined with JDF-enabled partner finishing solutions, this imposition scheme allows efficient runs of multiple titles with various unit counts, minimizing waste and offering optimum throughput. Using JDF/JMF, bi-directional communication throughout the manufacturing process ensures automated bindery and press set-up, communication with order entry and management systems, and more.

The intelligent automation provided by Canon Solutions America's **Book of One** solution is a good example of the type of end-to-end automation required for a successful future in book manufacturing.

## Where Do We Go From Here?

Book manufacturing and associated services, including design, distribution & fulfillment and conversion to e-book formats, together with specialized author services for self-publishers, is a significant opportunity for book printers willing to transition all or some of their book manufacturing to a digital platform. Publishers benefit as well, from a more efficient supply chain and the virtual elimination of backlists, removing a source of revenue loss that has heretofore been difficult to quantify and address.

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Book publishers and printers alike must be cognizant of inefficiencies in their current business models and remove those inefficiencies to the extent possible.

This white paper has provided insight and guidance relative to the market dynamics for book publishing, opportunities for growth and new revenue streams presented by a digital print manufacturing platform, and the tools and techniques that will allow book manufacturers to profitably address the higher volume of shorter runs that will continue to be a hallmark of book printing for the foreseeable future.

While consolidation among book printers is likely to continue as overall industry revenues remain flat or in decline and consumer reading habits continue to shift, the survivors will be those who have taken a forward-looking path and heartily embraced the digital future.

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This white paper was sponsored by Canon Solutions America. For more information about book manufacturing solutions offered by Canon Solutions America, visit [www.csa.canon.com/productionprint](http://www.csa.canon.com/productionprint) or call +1.877. 623-4969.

**Sponsored by:**

The Canon logo is displayed in a bold, red, sans-serif font. The letter 'C' is significantly larger than the other letters, and the 'o' contains a white vertical bar.

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