STANDARDS IN THE TRAVEL DISTRIBUTION INDUSTRY

PART I: PAST, PRESENT AND FUTURE
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HFTP® is a registered service mark and HITEC® is a service mark of Hospitality Financial and Technology Professionals.
65 YEARS, HFTP STAYS FOCUSED ON CONNECTING INDUSTRY

The origins of HFTP surround the development of standards, when multiple state-centered accountant associations joined together to form the National Association of Hotel Accountants (now HFTP). The motivation behind these groups was the interest in developing financial standards for the hotel industry, and continues to be used as the Uniform System of Accounts for the Lodging Industry (USALI), now in its 11th edition. HFTP this year is celebrating 65 years, and I am pleased that the association, while having grown significantly over the years, stays true to its original intent, to bridge together the industry to build better ways for conducting our businesses.

The publication of Standards in the Travel Distribution Industry, Part I: Past, Present and Future is an example of this concept, presenting an overview of industry technology standards and highlighting the important work done by numerous industry organizations to develop standards. Here you will read how these standards have impacted the industry and what needs to be done to continue their development. Every one of our organizations are striving to build strong connectors to take the business of travel into the future. I applaud every one and the professionals who volunteer valuable time to share their experience.

I would like to give a special thanks to the HFTP and OpenTravel board of directors, who have supported the growing partnership between the two organizations. Recently joining resources in June 2017, HFTP and OpenTravel are already working hard to conduct research and build awareness to the importance of industry standards. I look forward to having the OpenTravel Advisory Forum co-located with the HFTP Annual Convention this October, and future endeavors.

FRANK WOLFE
CEO • HFTP

BUILDING AWARENESS WITH HFTP AND OPENTRAVEL

In 1999, OpenTravel was founded by travel companies to create electronic message structures that facilitate communication between the disparate systems in the global travel industry. Over the nearly two decades, the organization has been successful in building specifications that have been widely adopted across multiple sectors. As the organization closes in on the end of its second decade, OpenTravel and HFTP took a step forward by joining resources to conduct research on the international impact of standards on global travel, as well as other initiatives. This publication is a result of that partnership, and I want to thank HFTP for producing Standards in the Travel Distribution Industry, Part I: Past, Present and Future. I would also like to thank HFTP for supporting OpenTravel standards since the inception, and the association’s willingness to accelerate the awareness, development and adoption of the evolving global OpenTravel standards across all aspects of the travel experience. I look forward to the continued work between OpenTravel and HFTP.

MIKE TINKEY
CEO • OpenTravel
Hospitality Financial and Technology Professionals (HFTP®) established in 1952, is an international, nonprofit association, headquartered in Austin, Texas, USA, with offices in Hong Kong, United Kingdom and the Netherlands. HFTP is recognized as the spokes group for the finance and technology segments of the hospitality industry with members and stakeholders spanning across the globe. HFTP uniquely understands the industry’s pressing issues and assists its stakeholders in finding solutions to their challenges more efficiently than any organization. It does this via its expert networks, research, certification programs, information resources and conferences/events such as HITEC. HFTP also owns the world’s only hospitality-specific search engine, PineappleSearch.com. For more information about HFTP, e-mail membership@hftp.org or download the HFTP/HITEC media kit via the HFTP website. Read industry updates on the suite of HFTP hospitality news sites: HITEC Bytes, Club Bytes, Finance Bytes and HFTP News.
OpenTravel Alliance (OpenTravel) is passionate about solving the problems inherent with connecting multiple systems within the complex travel distribution arena. Its mission is to enable the future of travel by driving the evolving digital experience for consumers. OpenTravel Alliance creates, expands and drives adoption of open specifications, including but not limited to the use of XML, for the electronic exchange of business information among all sectors of the travel industry.

OpenTravel is comprised of companies representing airlines, car rental firms, hotels, cruise lines, railways, leisure suppliers, service providers, tour operators, travel agencies, solutions providers, technology companies and distributors. Tens of thousands of OpenTravel message structures are in use, carrying tens of millions of messages between trading partners every day.

OpenTravel is a not-for-profit trade association, founded in 1999 by travel companies, with a primary focus on the creation of electronic message structures to facilitate communication between the disparate systems in the global travel industry. For more information on OpenTravel membership, new products or projects, please visit www.opentravel.org or e-mail info@opentravel.org.

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It is important to understand the players that have paved the way for travel distribution standards as we know them today.

The travel and tour industry has long relied on technological innovations to increase market share. The advent of train travel in the 1840s inspired Thomas Cook to organize the first guided tours. The emergence of commercial aviation in the 1930s revolutionized travel around the world, from the creation of rental car companies to the emergence of travel agents to help plan increasingly complex travel choices. American Airlines invested early in technology and created Sabre, the first global distribution system (GDS), in 1960. Competing Global Distribution Systems (GDS) continued to innovate in the 1980s. European airlines formed the GDS Amadeus, and Sabre allied itself with CompuServe to create the first online booking tool for hotels and airlines, EAASY Sabre. In 1987, Fidelio launched its first computerized PMS system.

Consumer commercialization of the Internet and personal computers in the early-’90s shifted travel bookings into the hands of the consumer. The 1990s also brought with it the emergence of the first online travel agencies and direct booking models. The advent of online travel, however, was slow to catch on with only a 3 percent market penetration in 2000. While today we take for granted easy-to-use graphic user interfaces (GUI) made possible by application program interfaces (API), this was not the case in late-’90s, delaying rapid marketplace acceptance by the end user. What could the travel industry do to capitalize on this new technology and make it easier for all users?

Organizing to Develop Standards

This question led to the formation of industry associations to set standards and capitalize on the opportunities created by technology advancements. As the travel and tourism industry continued to increase in complexity, there was a need for organizations to be standards-setters and create an environment to spur along collaboration and innovation.

### Hospitality Financial and Technology Professionals

Before the advent of the first GDS in the 1960s, the National Association of Hotel Accountants (NAHA), since renamed to Hospitality Financial and Technology Professionals (HFTP®), was founded in 1952. HFTP was one of the first associations which dealt with standards in the hospitality industry and its roots stem from a number of state-centered accountant associations who thought it would be beneficial to create a national network for collaboration. Through the support of both the Texas Hotel Accountants Association and the Hotel Accountants of New York, the National Association of Hotel Accountants was formally organized on October 26, 1952 in New York City at the Hotel Lexington.

From its inception, one of the primary goals of HFTP was to set standards in hospitality finance and information systems, including travel distribution. The contributions of this nonprofit association to the hospitality arena are numerous, including industry-leading conferences and events, cutting-edge councils and industry research. In 1972, HFTP sponsored the International Hospitality Conference to provide a forum for promoting and displaying the latest in hospitality technology. This initial conference focused on topics such as the first renditions of property management systems, point-of-sale systems and electronic cash registers. Laying the groundwork for future technologies in hospitality: mobile, CRM, APIs and in-room Internet.

<table>
<thead>
<tr>
<th>First Online Travel Agencies</th>
<th>1992</th>
<th>1994</th>
<th>1995</th>
</tr>
</thead>
<tbody>
<tr>
<td>Travacom combines with Apollo systems and eventually becomes Galileo</td>
<td></td>
<td></td>
<td>Lonelyplanet, Alamo.com, Southwestairlines.com, Ryanair.com and Easyjet.com</td>
</tr>
<tr>
<td>Travelweb</td>
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<tr>
<td>Expedia and Travelocity</td>
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<tr>
<td>Priceline and Travelzoo</td>
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<td>TripAdvisor and Hotwire</td>
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<td>Orbitz</td>
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<tr>
<td>1998</td>
<td>2000</td>
<td>2001</td>
<td></td>
</tr>
</tbody>
</table>

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Notes:
- [22] The advent of train travel
- [23] The emergence of commercial aviation
- [16] Competing GDS
- [24] European airlines
- [25] Sabre
- [26] Fidelio
- [19] Consumer commercialization
- [27] The 1990s also brought
- [28] Online travel agencies
- [29] GUI, API
- [31] HFTP
- [32] Hospitality Financial and Technology Professionals
- [33] National Association of Hotel Accountants
- [34] International Hospitality Conference
- [35] Property management systems
- [36] Point-of-sale systems
- [37] Electronic cash registers
- [38] Hospitality finance
- [39] Information systems
- [40] Travel distribution
- [41] Hospitality sector
- [42] Industry-leading conferences
- [43] Cutting-edge councils
- [44] Industry research
- [45] Future technologies in hospitality
- [46] Mobile, CRM, APIs
- [47] In-room Internet
The International Hospitality Conference was the precursor to the Hospitality Industry Technology Exposition and Conference (HITEX®) produced by HFTP, which is the world’s largest and oldest hospitality technology exposition and conference brand. HITEC offers a unique combination of top-notch technology education, and brings together the brightest minds and hottest technologies from across the globe.

To further its commitment to hospitality technology, in 1994 HFTP began offering a technology certification, the Certified Hospitality Technology Professional (CHTP). This certification was the first technology-specific certification offered in the hospitality industry which includes technology standards and integration. In addition to the CHTP, HFTP also offers the Certified Hospitality Accountant Executive (CHAE). Both certification programs are globally recognized for setting industry standards for hospitality finance and technology.

**Hospitality Industry Technology Integration Standards**

In the 2000s, standards like the Hospitality Industry Technology Integration Standards (HITIS), an initiative of the American Hotel and Lodging Association (AH&LA), known at that time as the American Hotel and Motel Association (AH&MA), played a significant role in connecting different distribution systems. HFTP was one of the major supporters of HITIS from its creation, which dates back to 1996. Industry pioneers, such as Frank Wolfe, CEO of HFTP, were significant contributors to the HITIS initiative. In July 1999, the HITIS Advisory Committee endorsed the recommendation to designate XML as the primary platform for the HITIS standards. An interface protocol in XML offered interoperability without the need for a bridging technology between the two original mappings.\[16\]

In the *HITIS Correlation and Interface Standards* document, the council provided a combination of interface specifications, a data dictionary and a glossary of terms. The interface specifications laid out definitions of the basic data types, naming conventions and general practices for a suite of 15 individual interface standards.\[16\] According to council documentation, “The XML mapping is enhanced by the use of the HITIS models in Unified Modeling Language (UML) and associated object-oriented documentation that defines the business scope of each of the standards and descriptions of the individual data elements. The UML model serves as an electronic description of the HITIS standards and a basis for developers to use to build applications in an object oriented architecture.”\[16\]

On June 20, 2000, the HITIS initiative and OpenTravel Alliance (OpenTravel) reached an agreement to develop and maintain standards technically relevant to their industries.\[16\]

**HOSPITALITY INDUSTRY TECHNOLOGY INTEGRATION STANDARDS (HITIS)**

Launched in 1996 by the American Hotel and Motel Association (AH&MA), now American Hotel and Lodging Association (AH&LA), to enable the creation of interface standards focused on CRS and property level systems. Contributions included significant adoption of standards prescribed by the lodging industry and product vendors. HITIS eventually merged standards with OpenTravel on adoption of ebXML specifications by OpenTravel.

The goal of HITIS was to “create computer interfacing standards that will accelerate the hospitality industry’s technology usage and lower automation costs. The HITIS Project’s mission was to direct a non-proprietary, consensus based process to develop voluntary standards for the integration of evolving computerized system and sub-system transactions in the hospitality industry.”\[16\] HFTP was one of the associations instrumental in the development of HITIS. Members of HITIS included individuals from major hospitality related corporations and associations such as: HFTP, AH&MA, National Golf Course Owners Association (NGCOA), Micros-Fidelio Systems, Cyntergy Corporation, IBM Worldwide Travel & Transportation, Microsoft Corporation, Cornell University, Sabre Travel Information Network, National Retail Federation, National Restaurant Association and American Express.\[16\]

**OpenTravel**

In 1999, when OpenTravel formed, it was to develop a group capable of finding solutions to the problems unique to integrating multiple travel systems.\[31\] Online travel was not yet the seamless experience it is today, and the specifications created by OpenTravel would allow for an increase in market penetration.\[31\] OpenTravel is an alliance of tour and travel companies who work together to identify how messages are created and prioritized in tour and travel technology.\[18\] As a not-for-profit trade association, OpenTravel’s primary focus has been on creating specifications and structures to facilitate messages between different travel software.\[18\] Founding companies included Alaska Airlines, American Airlines, Continental Airlines, Delta Airlines, Midwest Express, Northwest Airlines, Trans World Airlines, United Airlines, Vanguard Airlines, Bass Hotels and Resorts, Hilton Hotels, Hyatt Corporation, Marriott International, Sterling Hotels, Swissotel, Alamo Rent A Car, Avis Rent A Car, Budget Rent A Car, and Dollar Rent A Car.\[7\] Additional companies included credit card issuers and central reservations companies.\[38\]
In its early years, OpenTravel emerged with a line of successful advances in travel communications. In 2002, Worldspan worked closely with OpenTravel to launch two specifications that helped suppliers and retailers in the travel industry to better communicate, the specifications 2001B and 2001C.[26] One major innovation of this code was to allow users to move customer profiles from one GDS to another without having to re-enter the information. [28] These innovations helped to “reduce supply chain cost” and increase global trade. [31] After a shaky start to implementing electronic tickets, the airline industry turned to OpenTravel to develop specifications that allowed for a more seamless travel experience.[27] The specifications created by OpenTravel allowed for the successful creation of middleware to allow Internet technology to speak to GDS technology[24] and allowed Sabre to create the first Web-based platform for GDS communications in 2003.[39]

The creation of IT standards for the tour and travel industry has created a host of benefits for the industry. By the fifth year, OpenTravel had already launched eight of its 1.0 set of specifications to facilitate business-to-business communications and, with over 130 companies participating, was striving to increase participation from the tour and travel industry.[30] The code generated by OpenTravel allowed for the first direct connect between Expedia and lodging companies in 2004. [31] It has decreased implementation times, lowered IT costs, increased functionality from travel partner to travel partner and created credibility in the market. [27] OpenTravel messages have facilitated online bookings for the cruise industry while lowering the costs for bookings by 50 percent. [27] For the airline industry, OpenTravel specifications dramatically reduced costs associated with GDS pricing errors, inventory discrepancies, and billing errors by increasing the efficiency of business-to-business communications. [27]

The OpenTravel Ground Transportation 2.0 is an open source messaging standard that bridges the distribution gap and creates more opportunities for ground transportation bookings in an industry segment which was valued globally at $41.5 billion in 2015. [11] According to Susanne Auinger of Deutsche Bahn, “Ground Transportation 2.0 was designed by OpenTravel Alliance members and industry partners from all over the world with the goal of improving travelers’ encounters with ground transportation.” [39] The implementation with CarTrawler, a business to business travel technology platform, allowed for real time pricing for the car rental industry and in its first year, increased ancillary revenue for the car rental agency by 31 percent. [27]

### Standards Adoption

Many companies adopted standards in the travel industry, such as leading industry GDS like Amadeus and Sabre. In addition to online travel agencies (Expedia), others participated such as large software companies (Microsoft), and many established service providers in the airline, lodging and ground transportation segments. A large part of the success of OpenTravel has been due to its unique approach of creating industry workgroups to develop specifications for business-to-business communication. There are four work groups to focus on different segments: transport, hospitality, architecture and travel integration. These workgroups allow travel businesses to focus on creating cross business solutions by bringing high level IT professionals from across the industry to work together on writing the code needed for each specifications. [16] The early specifications are collectively referred to as the 1.0 Message Suite. The codes in the OpenTravel Code Table transverse a wide array of travel products from airlines and lodging to golf and package tours.[34]

Although there are a multitude of success stories emerging from these cross-industry work groups, some of the high points warrant examination. It was smooth sailing for the cruise industry when the 2006A specifications were released and created messages for the multitude of components associated with the cruise booking cycle. [25] OpenTravel released the 2006B specification, that included the hotel event message set, which allows for efficient communications between hotels and meeting planners booking conventions and meetings. [36] Later, released by HTNG, the 2009B certification specifications created standardized interfaces between hotel property management systems (PMS) and guest room devices (televisions, telephones, door locks, etc.) to facilitate the integration of new systems on the property level, which increased security procedures for credit cards. [42]

In 2010, one of the major initiatives set forth by the Hospitality Technology Strategic Initiatives Council (HTSIC) was to examine industry standards pertaining to PCI compliance. HFTP took on a major role in the initiative by creating a PCI Compliance Task Force and hosting an industry roundtable. The ultimate goal for HFTP was to develop a best practices document that both industry professionals and credit card companies could use to better understand how PCI compliance impacted the hospitality industry. “HFTP decided to put our resources behind the project since we are the only global organization in hospitality that represents both finance and technology professionals,” said Terry Price, CHAE, CHTP, CPA, 2009–2010 HFTP Global president.[54]

The specifications created by OpenTravel allowed for evolutions of distribution and payments in the tour and travel industry. Nayar and Beldona described how distribution went from a traditional linear model to a traveler-centric model, where the electronic marketplace allows for simultaneous distribution of information to
everyone involved in the travel process (customer, online travel agency, hotel, GDS, etc.). Different specifications have worked to ease payment acceptance and to evolve new specifications for new safety and security needs. For example, the message modifications released in the 2006B specification made it easier to change payment on an existing reservation.

In 2016, HFTP announced that they would assist OpenTravel with an upcoming initiative to develop the new OTA 2.0 Object Oriented Platform in the lifestyle and development areas of golf and spa. "Many members of HFTP represent the golf and spa segments," said HFTP CEO Frank Wolfe, CAE. "As a matter of fact, HFTP has won numerous awards and acknowledgments for our contributions to the club industry and the more support we can provide to make the industry better for our members, the closer we come to fulfilling our mission."

How do these specifications facilitate travel and tourism bookings? The illustration at right details how specifications fit into the distribution cycle in hospitality. Travel distribution specifications cover every part of the customer cycle, from viewing tour and travel generated content for travel planning to the reservations process, the interfaces the guests use during their stay, and finally post-travel behavior.

Travel industry leaders look to OpenTravel as an important leader in the travel and tourism industry. Executives at Rezgo stated that they are a part of the OpenTravel because they believe it is "important to the long-term growth of the Hospitality Technology Strategic Initiatives Council (HTSIC)

The HTSIC, was a group spearheaded in 2009 by HFTP and Hospitality Technology Next Generation (HTNG) to address pressing industry needs as they relate to hospitality technology. The council worked to identify industry initiatives and determine processes for these initiatives in order to reduce duplicated efforts.

"Technological evolution is broad and wide-ranging, making it difficult to direct changes in a way that benefits the hospitality industry as a whole," said Frank Wolfe, CAE, CEO of HFTP. "The council hopes to consolidate efforts and feedback from multiple resources so that we can address these changes in an organized fashion that benefits the industry."

"The associations represented on the council rely entirely on voluntary contributions of time and expertise from our members,” said Douglas Rice, CEO of HTNG. “Coordinating through the council will help us ensure that all of the associations can leverage each others’ efforts, providing a greater ROI to the industry from our members’ efforts, and with less duplication."

Council members included representatives from the following organizations:

- American Hotel and Lodging Association (AH&LA)
- American Resort Development Association (ARDA)
- Hospitality Financial and Technology Professionals (HFTP)
- Hospitality Information Technology Association (HITA)
- Hospitality Sales and Marketing Association International (HSMAI)
- Hotel Electronic Distribution Network Association (HEDNA)
- Hotel Technology Next Generation (HTNG)
- OpenTravel Alliance (OpenTravel)
travel industry.”[21] When OpenTravel Golf 2.0 was launched in 2017, Paul Armitage, director of Le Golf National in France stated, “Leading France’s national golf facility and placing it at the forefront of incoming travel to Paris, France for golfers, but also as a former executive with a European multi course company we fully support the OpenTravel Golf 2.0 specifications and are actively implementing them to connect consumers and travel providers and increase access to our golf course globally.”[29] Susanne Auinger of Deutsche Bank said of the Ground Travel specifications launched in June 2017, “Ground Transportation 2.0 was designed by OpenTravel Alliance members and industry partners from all over the world with the goal of improving travelers encounters with ground transportation.”[30] An academic study found that travel executives agree that OpenTravel specifications are easy to use, highly useful and cost effective.[29] In fact, this study found that one of the benefits of OpenTravel specifications are the economics of scale achieved when implementing them globally.[29]

Additional Contributors
The increased reliance on technology and changing travel industry led to the creation of other industry organizations, councils and associations which oversee and provide guidance in various facets of travel distribution. These organizations have all played a role in advancing the hospitality experience by enabling disparate technology systems to communicate with each other. Some organizations like HFTP, have a broad scope and encompass standards for multiple segments of the travel industry such as lodging, clubs, restaurants and other verticals. Additional associations, like the International Air Transport Association (IATA) or Gaming Standards Association (GSA), focus on a very specific segment of the hospitality industry. The following organizations have all made significant contributions in travel technology; and, specifically, in travel distribution.

International Air Transport Association (IATA) www.iata.org
IATA was founded in 1945 and is the trade association for the world’s airlines, representing some 275 airlines or 83 percent of total air traffic. The IATA supports many areas of aviation activity and helps formulate industry policy on critical aviation issues. In 2017, distribution and payment transformation is one of the major priorities for IATA which consists of the following three major pillars:

New Distribution Capability (NDC)
NDC is an IATA-led initiative that provides passengers with personalized choice of products and services. This is done through the definition of a messaging standard that enables retailing opportunities through the indirect (GDS/travel agent) channel.

ONE Order
ONE Order is the concept of a single customer order record, holding all data elements obtained and required for order fulfillment across the air travel cycle — such as customer data, order items, payment and billing information, fulfillment data and status.

NewGen ISS aims at transforming the current ISS business model, which facilitates the distribution and settlement of funds between travel agents and airlines via IATA’s Billing and Settlement Plan.

Airline Tariff Publishing Company (ATPCO) atpco.net
ATPCO was originally established as the Air Traffic Conference of Americas, which filed passenger tariffs. The organization took on its current status in 1975 after a reorganization. The ATPCO is an industry leader in airline fare, fare-related data distribution and industry solutions. The information is collected from airlines worldwide and distributed to global distribution systems such as Ama-deus, Travelport and Sabre; online travel agents (Expedia and ITA); and other computer reservation systems (CRS). ATPCO makes the process efficient by permitting each airline to submit and distribute its information, thereby giving each CRS/GDS the opportunity for a single source of fare-related data. One of the unique features is an Automated Rules product. It permits a CRS/GDS to automatically load its pricing rule data tables without significant human intervention, thereby allowing new fares to be sold in the marketplace in the shortest possible time.

The mission of the organization includes these tenets:
• Lead the airline industry in defining standards and implementing industry solutions.
• Collect and distribute airline fare-related data, reliably and efficiently.
• Provide products and services that reduce distribution costs and protect or increase airline revenue.

Hotel Electronic Distribution Network Association (HEDNA) — www.hedna.org
HEDNA, founded in 1991, is an alliance dedicated to enhancing hospitality distribution and promoting the use of GDS.[14] This not-for-profit association provides its members with ever-changing resources regarding electronic distribution.[14] HEDNA has several working groups which examine these standards. The Payments Forum is identifying the need for standards in interfaces, databases, regulations and privacy areas. The Content Working Group is working on the connectivity between hotel systems and distributors. As mobile becomes popular, there is also a special group to help mobile enter the hospitality industry and enhance the customer’s experience.
Gaming Standards Association (GSA)
www.gamingstandards.com
GSA is an international trade association that creates benefits for gaming manufacturers, suppliers, operators and regulators. The GSA facilitates the identification, definition, development, promotion and implementation of open standards to enable innovation, education and communication for the benefit of the gaming industry. GSA has created standards that are in use today, driving the industry to innovation and growth. Established in 1998, GSA members represent a wide cross section of the global gaming industry.

Hospitality Technology Next Generation (HTNG) — www.htng.org
HTNG is a not-for-profit trade association formed in 2002 that fosters collaboration and partnership among hoteliers and technology providers to develop next-generation solutions. HFTP was one of the first supporters of HTNG when it was created in 2002 at HITEC.

In January 2017, HTNG launched the Next Generation Distribution Messaging Workgroup. This workgroup reviewed the connectivity of standards in the travel industry including the OpenTravel 2.0 object model and the IATA NDC. According to the description of the workgroup on the HTNG website, "HTNG and The OpenTravel Alliance are mainstays of hotel and travel messaging and offer widely adopted message standards for operations and bookings across a diverse ecosystem of partners and internally within many companies."[17]

Evolving Standards
As the above timeline above illustrates, the new travel distribution standards have evolved as the needs of the industry have changed. These needs have included cloud computing, mobile technology, and evolving safety and security needs. OpenTravel has endeavored to form partnerships with international partners to increase its global impact. In order for specifications to be widely adopted, it is important for organizations with global reach to join together. For this reason, OpenTravel has co-located its office with HFTP in Austin, Texas USA in August 2017. With the global reach of HFTP Global and expertise of its membership, OpenTravel will have greater opportunities to tap into a worldwide knowledge base.

Throughout the years, associations such as HFTP and OpenTravel have created relationships with leaders from throughout the tour and travel industry. In addition to members of these groups, companies from all parts of the hospitality industry have benefited from specifications and contributed to industry advancement in travel industry standards.
In order to pave the way for the future of travel distribution, it is important to understand current industry trends and the major players in travel technology.

Since its inception in 1999, OpenTravel has played an important role in facilitating business-to-business communication which enhances the ability of companies in the travel industry to provide the most up-to-date and relevant information to their clients and guests. Technology continues to advance and organizations in the travel industry are analyzing and innovating to determine the best avenues to pursue in order to satisfy the demands of their business partners; and, ultimately the end customer, the traveler.

Technological advancements have changed the traditional linear distribution pattern. In the past, people booked travel through brick-and-mortar travel agents. Now, with online travel agencies such as Expedia and Ctrip, consumers have become accustomed to online purchasing. To manage distribution costs many hospitality service providers such as hotels, have chosen to promote direct sales and avoid using other distribution methods to consumers. According to Cindy Estis Green, co-founder and CEO of Kalibri Labs, LLC and a director on the HFTP Global board, starting back in 2015 hotel industry giants such as IHG, Accor, Hilton, Marriott and Hyatt all started direct booking campaigns. The study by Kalibri Labs, Demystifying the Digital Marketplace: Spotlight on the Hospitality Industry, of which HFTP was a sponsor, analyzed distribution. According to analysis by Kalibri Labs, "brand.com bookings are significantly more profitable than OTA bookings, to the tune of a roughly 9 percent before factoring in ancillary spend which can take this to almost 18 percent.”

In order to succeed in this competitive environment, consolidation has become a popular avenue to increase bargaining power. Historically, the hotel sector has been regarded as a highly fragmented market; but, in recent years,

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**THE TRAVEL DISTRIBUTION INDUSTRY TODAY**

**CONTENT/INFO FLOW**

- Suppliers
- Aggregators and GDS
- Travel Agents
- Metasearch Companies
- Gatekeepers

**FINANCIAL FLOW**

- Suppliers
- Aggregators and GDS
- Travel Agents
- Metasearch Companies and Gatekeepers
- OTA

- Indirect Payment
- Referral fees and advertising
- Travel agent IT
- Service fee and fare

- Direct Payment
- Incentive Payments
- Subscription and travel agent IT

Source: Adapted from Travel Distribution — The End of the World As We Know It? LSE Consulting
there have been a number of mergers and consolidations in North American markets. In 2016, Marriott completed the acquisition of Starwood, becoming the largest hotel company in the world. In addition, the difference between metasearch companies and online travel agencies is blurring. For example, TripAdvisor now provides booking services, Priceline took over Kayak, and Expedia acquired Orbitz and Travelocity in 2015. Even Google and Facebook provide direct booking services online. The relationships among the players in the travel industry have become diverse and complicated.

New Ways to Pay
With billions of mobile users, payment is changing and becomes a complex topic to add into the mix. Payment methods are not limited to cash or credit card anymore. Contactless payment, mobile wallets and digital currencies all allow companies to handle payments in different ways. Apple Pay, Android Pay, Alipay and WeChat Pay in China, are all driving innovation and encourage new business models. According to data presented from a survey by Statista.com (at right), the most popular digital wallet in the United States was PayPal with 76 percent of respondents indicating they use this form of payment. Other payment methods growing in popularity included Amazon Payments (24 percent), VisaCheckout (15 percent), Google Wallet (14 percent) and Apple Pay (12 percent).

To design new models and to speed payments, standards are needed to expedite connections and communication amongst different parties in the travel landscape.

As the proliferation of web services and mobile devices increases, companies in the travel industry realize that customer experiences are the best differentiators and matter more than ever. At the Sabre Airline Solution Global Conference in 2016, the customer-centric digital experience was a key focus of the Sabre+Skift livestream. The report emphasized "...the design of flexible digital systems which make connecting with customers on a personal level easier, anticipating needs, resolving concerns and suggesting solutions at the right time to motivate ancillary purchases or improve customer engagement." To achieve the personalized journey, data must be better managed and integrated across the organization.

Mobile Phones Everywhere
One of the most important trends impacting the travel industry is mobile phone usage. As mobile becomes a ubiquitous device, it plays many roles in the travel sector. It is estimated that there are approximately 4.77 billion global mobile phone users in 2017, with nearly half from China (1.4 billion) and India (1.0 billion). By 2019, it is predicted that there will be 1.5 billion mobile users in China and 1.1 billion mobile users in India. In America, individuals use mobile phones and devices to search information and compare retail and travel deals, but laptops and computers remain the principal point-of-purchase for now. In China, mobile phones are the primary method to purchase products and book services. In 2015, mobile flight and hotel searches on Google increased 33 and 49 percent year over year, respectively.

The use of mobile is also likely impacting the customer experience. Compared to a PC, mobile devices typically have a camera, audiovisual capabilities, a location sensor and many also have fingerprint sensors or employ other biometric markers for authentication. These functions can be fully used to enhance the customer experience by incorporating features such as the following: airports and hotels can use mobile to complete the check-in process, travelers can receive real-time translation while traveling in foreign countries and restaurant suggestions can be made through mobile devices with access to the Internet. In addition, many customers also expect 24-hour customer service throughout their travels, like changing flights and ordering in-room services. As mobile reshapes the travel experience, the seamless connectivity between relevant systems is a necessity.
Bridging a Spectrum of Systems

There are multiple mobile operating systems. Globally, the two most popular mobile operating systems are Apple iOS (e.g., iPhone) and Android (e.g., Samsung Galaxy, Sony, HTC, etc.), followed by others like RIM and Windows. Applications which combine mobile technologies, such as fingerprint scanner and near-field communications (NFC) improve the transaction and communication process. Developers need standards to build more seamless and integrated systems and guarantee functions will run smoothly and flexibly on each platform. Standards also increase productivity and decrease the cost, impacting both money and time.

The sharing economy is another major trend impacting travel distribution; which, when defined in a broad sense, is simply the sharing of assets and services with others. It is also known as peer-to-peer platforms. In the travel industry, the sharing economy includes online platforms like Airbnb where individuals rent private rooms or houses to overnight guests; and Uber, where drivers use their private cars to drive consumers from point A to point B. In a blog published in June 2016 on HFTP Connect, it explained that Airbnb increased its impact on the lodging industry by expanding to include business travel as well. As of June 2016, over 50,000 companies had booked travel through Airbnb including companies like Google and Salesforce. Based on a report by the European Commission, there is an estimated $3.5 billion in revenues from the sharing economy and the value of sharing accommodations in Europe alone will grow to more than $15 billion by 2017.

Peer-to-peer platforms build trust and support transactions through mobile and social media. Providers and users can review profiles, rate and pay online. For example, Airbnb integrates Facebook, Instagram and even WeChat in China so that renters and providers can check basic information online and know more about each other. According to Jennifer Jones, HFTP member and president of J2 Hospitality Solutions, "From a technology perspective, the user experience of booking on the Airbnb platform is very fluid. The booking widget is located above the fold and very simple to access. And the portal even assists property hosts with a mini 'revenue management system' built in to help suggest rates based off of the demand Airbnb sees on their entire site." Besides social networking, new online payment systems act as middlemen for both parties and guarantee that transactions are safe and fair. The sharing economy has a different way of communicating, which has changed travel distribution and creates more demand for seamless connectivity and communication. To support similarly seamless transactions, distribution standards have to adapt and be applicable to the new sharing economy business model.

The current keys to success for industry executives in travel distribution technology are data and connectivity, which are areas that HFTP and OpenTravel can play a critical role in supporting the travel and tourism industry. Motivated by the popularity of customer-centric solutions, OpenTravel completed a Reviewer Information Project in 2013 to build a way to exchange customer experience information. Hotel ratings on social media and reviews from questionnaires are able to be communicated through hotel review messages designed specifically for this purpose.

According to Claudia Infante, senior director of revenue and distribution strategy — hotels and casinos at Hard Rock International, “it is critical that CTOs and CIOs understand the importance and value of data in all its facets: standardization, accuracy, quality, privacy, security and governance. These critical attributes are the mainframe to assign and determine the intrinsic value of datum.” How are systems connected and data shared? How does data travel from point A to point B? Standards set by associations such as HFTP and OpenTravel provide a critical piece of this puzzle to the travel industry.

For example, OpenTravel specifications are set forth by workgroups focused on various business functionalities in the travel industry: architecture, hospitality, transport and travel integration. Except for the architecture workgroup, each group serves companies within a specified segment of the industry. The hospitality workgroup includes hotels, hostels, vacation rentals and cruise lines. The transport workgroup serves air, car, rail and ground transportation verticals. The travel integration workgroup provides service to other companies which do not functionally fall into the hospitality and transport arenas. The architecture workgroup is an overarching workgroup and is involved with all technical aspects of the OpenTravel specifications, including model building, tooling and creating best practices.

OPENTRAVEL STANDARDS TIMELINE

1999 OpenTravel formed as a member funded, not-for-profit organization.

2001 OpenTravel produces the first open standards for the travel industry.

2014 OpenTravel architects its new model-driven schema product.
OpenTravel specifications have evolved over time from the first specifications developed and released in 2001 to the present day. In 2001 OpenTravel released the first open specifications for the travel industry as part of the OpenTravel 1.0 Message Suite. The OpenTravel XML Message Suite contains a collection of XML schema messages which consist of the travel segment name and the type of functionality they provide such as booking path, ancillary services, descriptive information and general services functionality. In 2014, OpenTravel released the OTM-DE OpenTravel 2.0 model designer. This model generates an open source messaging specification which fills the distribution gap and enables more bookings, more revenue, and aims to increase the distribution and meet the consumer needs of today.

**JSON and REST**

The OpenTravel 2.0 Model Designer generates not only XML messaging, but also JSON messaging to realize the improvement of applications and capability of lightweight messaging. As web services are widely used, protocols and specifications for exchanging data between applications and systems are a high priority for the travel industry. JavaScript Object Notation (JSON) is a popular lightweight data-interchange method which was originally specified by Douglas Crockford in the early 2000s. As shown in the figure (right), the popularity and usage of JSON has been gaining ground with 20 percent of all new APIs based on only JSON support in 2011. This percentage has invariably climbed much higher over the past six years due to the fact that JSON is lighter weight, easy to interpret and does not require opening and closing tags, making it a method appreciated by both developers and providers.

An API, which stands for application programming interface, is “a set of routines, protocols and tools for building software applications. An API specifies how software components should interact. Additionally, APIs are used when programming graphical user interface (GUI) components”[1]. So why is an API important? What role does it play in travel distribution? Basically, an API makes it easier to develop a program by providing the basic building blocks which then can be assembled by the programmer.[1] In recognizing the importance of APIs for the travel and hospitality industry, HFTP began collecting the first API database for the hospitality industry in April 2017. The database consists of APIs collected from HITEC 2017 exhibitors. Another way HFTP is leading the industry and spurring on technology innovation.

The increasing complexity and cost of managing multiple travel distribution systems is leading many companies today to find and adopt a more standardized architectural style, such as REST (REpresentational State Transfer). It provides standardized resources that enable precise interaction with other REST systems. In a dissertation, Roy Fielding introduced REST architecture style and how it can be used to help design and develop architecture for the modern Web.[10] It is a lighter weight communication between producers and consumers, which is also the reason why REST is a popular building style for cloud-based APIs. REST can be adopted both in websites and mobile applications, and by industry providers such as Sabre, Microsoft, Google and Facebook. RESTful web services are cost-effective in terms of implementing and learning. They are easy to leverage with free and inexpensive tools and save time for developers to write applications.

In fact, both JSON and REST improve interoperability between disparate systems across and within organizations. They shape and speed up the development of standards. The OpenTravel specifications are also affected by the development of architectural style and data-exchange methods. Using standards that can be integrated into all known types of hospitality systems is usually a better choice to pursue. Standards enable communication between the different systems in the travel distribution space such as global distribution systems (GDS), property management systems (PMS) and customer relationship management systems (CRM).
The future of travel distribution lies before us. The possibilities are numerous with new technologies emerging in the travel space.

Travel distribution is highly complex, with many industry players for multiple segments, and consumers are on the cusp of demanding automated travel arrangements. With voice recognition, artificial intelligence and bots on the rise in other industries, travel is soon to follow. Consumers have the ability to ask Amazon Alexa to request a ride from Uber or ask Google to find the cheapest airfare to Paris, so the next logical step will be for consumers to have the entire process completed for them without having to lift a finger, or an electronic device. Travelers, whether booking business or leisure travel, will simply need to state where they would like to go and the technology, a virtual assistant, will do the rest... booking airfare, excursions, Uber rides, rail transportation, etc. Virtual assistants, in the very near future, will use big data “to make consumer-specific recommendations on destinations, hotels, ancillary services and in-destination services”. This process brings with it numerous complexities with multiple systems needing to coordinate and communicate.

Both the OpenTravel 2.0 object model and the IATA NDC bring us one step closer. Both specifications bring the industry closer to a true retailing environment by enabling a richer booking experience, greater opportunities for cross-selling and up-selling which will allow for increased value and opportunities. In an article which presented the development of the HTNG Distribution Messaging Workgroup, Riko van Santen, vice president of digital strategy and distribution at Kempinski Hotels stated, “In order to redefine distribution solutions and provide a rich, seamless experience for guests, we must have agile, integrated systems across an increasingly complex travel ecosystem. We can only do that by embracing technology standards of the industry, which are not fully synchronized today.” With all of the travel technology organizations striving for a common goal, the industry will reach full synchronization and automation.

Beyond the air and lodging segments, which often receive the most attention, there are multiple industry verticals which can be tapped into to maximize the traveler’s experience such as tours, spa, ground and rail transportation. One industry vertical receiving attention in 2017 is rail. According to Cameron Jones, CCO of SilverRail technologies, “Most travel companies don’t sell rail because it is a complex product to sell. It is often state run and there is a history of protectionism. However, it is a very efficient way to move people and it is 90 percent more eco-friendly than air.” With rail industry specific APIs, industry giants such as Expedia can package other products with rail such as hotels, car rental, attractions and air transportation.

**COMMON INDUSTRY ACRONYMS**

- API – Application Programming Interface
- CRS – Central Reservation System
- GDS – Global Distribution System
- GUI – Graphical User Interface
- HTTP – HyperText Transfer Protocol
- ITA – ITA Software by Google
- JSON – JavaScript Object Notation
- OTM – OpenTravel Model
- PMS – Property Management System
- QPX – Pricing, Shopping and Availability System
- REST - REpresentational State Transfer
- RPC – Remote Procedure Call
- SDO – Standards Development Organizations
- SOA – Service-Oriented Architecture
- SOAP – Simple Object Access Protocol
- SSO – Standard Setting Organization
- TSS – Travel Support System
- URL – Uniform Resource Locator
- WSDL – Web Services Description Language
- XML – Extensible Markup Language
Blockchain Technology

One technology that must be examined by those involved in travel distribution to determine its potential impact on the industry is Blockchain. Blockchain is “an incorruptible digital ledger of economic transactions that can be programmed to record not just financial transactions but virtually everything of value,” defined by Don and Alex Tapscott, authors of Blockchain Revolution (2016). Using cryptographic techniques and a distributed messaging protocol, blockchain technology is consistent, durable, shared and mutualized, which contributes to enhancing reconciliation and data sharing.

The characteristics of the travel industry align well with the capabilities of blockchain and many issues can be solved by blockchain technology, such as overbooking, fraud, compliance, loyalty and settlements. Many players are involved in data sharing from booking arrivals including airlines, online travel platforms, airports, government, hotels, car rental agencies and so on. Each needs to collect, store, and even share customer data and operating information. But, actually, behind the whole process, complicated and endless data reconciliation is happening by every touchpoint and so many systems can fall behind. By using blockchain technology, not only are there operational efficiencies and a potential for increased revenue, but also safety and security are guaranteed. With the strong competitive advantage of blockchain technology, it might be taken into consideration of standards in the near future. Both HFTP and HTNG have created groups to examine the possibilities and standards needed for widespread deployment of blockchain in the hospitality industry.

In June 2017, during the 45th anniversary of HITEC in Toronto, Ontario Canada, HFTP announced the creation of the HFTP Blockchain Technology Task Force. HFTP bylaws state that the association will “provide leadership in the establishment and enhancement of hospitality accounting, financial management, and information processing practices and standards.” Therefore, the creation of a task force of this nature is in alignment with the bylaws and goals of the association. According to HFTP CEO Frank Wolfe, “Blockchain technology has been predicted to have the greatest impact on the future of the world economy... As the industry’s nonprofit brain trust on finance and technology, it is incumbent on us to address the issue before blockchain reaches maturity and assembling a task force is the first step.”

In August 2017, HFTP and OpenTravel announced the two organizations would work together on travel distribution specifications; and, in order to facilitate this collaboration, OpenTravel has co-located its corporate office with HFTP Global headquarters in Austin, Texas, USA. “Both HFTP and OpenTravel share common goals, which are to develop and provide resources that benefit and lead to the success of the hospitality industry,” said Wolfe on the announcement of the partnership between the two associations. Mike Tinkey, CEO for OpenTravel, stated “We are excited to strengthen our alliance with HFTP, especially with their global footprint, to increase awareness, education and adoption globally of OpenTravel standards and interoperability across all aspects of travel to enable and enhance the consumer experience.”

Collaboration between HFTP and OpenTravel began well before the recent partnership announced in August 2017. In 2016, HFTP assisted OpenTravel with the 2.0 Object Oriented Model in golf and spa, and also sponsored the 2016 OpenTravel Advisory Forum. The 2.0 Object Oriented Model is the new generation of open source messaging for consumer direct booking. It increases the developer’s productivity through a more consistent, simple, and flexible process, and also promotes connectivity and ultimate profitability. HFTP provided assistance via its global network of members, its industry research centers, conferences and its global electronic distribution channels. The global wellness tourism sector in 2017 is estimated to be worth $680 billion U.S. dollars and growing. Industry bookings in the U.S. have been increasing steadily with 73 percent of travel agents indicating an increase in spa travel bookings in North America in 2013. The spa specifications set forth by associations such as HFTP and OpenTravel will assist growth in this segment of the travel industry and facilitate distribution opportunities.

The first primary task going forward for both organizations is to develop mobile specifications in the travel industry. In 2017, OpenTravel will co-locate its OpenTravel Advisory Forum with the HFTP Annual Convention in Orlando, Florida, USA. The OpenTravel Advisory Forum provides an opportunity for technology professionals from the travel industry to connect, discuss and share their insights. Hotel, air, cruise, leisure, car rental and other segments of the travel industry will all be represented at the Forum.
When talking about travel distribution, there are multiple factors which will transform the distribution landscape. Regulations must be mentioned and questions asked relating to data protection and privacy laws and other topics such as rate parity. In April 2016, the European Union (EU) released the EU General Data Protection Regulations (GDPR), which will require many organizations to employ a Data Protection Officer by May 25, 2018 to be in compliance. In order to assist organizations in meeting this goal, HFTP has recruited a team of experts to develop guidelines and supporting resources for Hospitality Data Protection Officers (HDPO). Following the first meeting of the HFTP HDPO Task Force, Alvaro Hidalgo, managing partner at FIRSTLOGIC Consulting and task force chair stated, “I am very pleased with the outcome of our first meeting... We have identified areas in which specific solutions (registration challenges, integration of DPO, communication with IT providers and others) are being analyzed, and we are confident to bring those solutions to the industry”.

Be sure to keep attention on the sites of both HFTP and OpenTravel to monitor the progress as they work together to develop industry standards that keep pace with continually evolving hospitality industry technology and trends.

GET INVOLVED
Numerous industry organizations and councils are working hard to develop standards and educational opportunities. To illustrate, below are industry events and councils from HFTP and OpenTravel to get started. A list of other organizations accomplishing related work is on page 20.

Golf Business TechCon
September 27–28, 2017
Aria Resort and Casino
Las Vegas, Nevada USA
www.golfbusinesstechcon.com

OpenTravel Advisory Forum
October 23–25, 2017
Omni ChampionsGate
Orlando, Florida USA
www.opentravel.org

HFTP Annual Convention
October 25–27, 2017
Omni ChampionsGate
Orlando, Florida USA
www.hftp.org

HITEC Dubai
November 14–15, 2017
Conrad Dubai
Dubai, UAE
www.hitec.org

HFTP Blockchain Technology Task Force
Task force is working to prepare for the technology’s future impact on hospitality.
www.hftp.org

FOLLOW ALONG WITH INDUSTRY NEWS:
Since the creation of OpenTravel in 1999, the organization has released new specifications annually to assist the travel industry. The first published specification, Publication 2001A, part of the 1.0 Message Suite, was the result of a cooperation agreement between two organizations: OpenTravel and HITIS, sponsored by the American Hotel & Motel Association, since renamed to the American Hotel & Lodging Association (AH&LA). HFTP was also one of the pioneering associations who participated on HITIS.

The OpenTravel specifications are set by workgroups focused on various business functionalities in the travel industry: architecture, hospitality, transport and travel integration.

**Architecture Workgroup**
The Architecture Workgroup works on all aspects of the OpenTravel specification which are outside the content of the XML messages themselves and which generally affect all of the industry workgroups equally.

**Hospitality Workgroup**
The Hospitality Workgroup serves the needs of the hotel, hostel, vacation rental and cruise travel industry verticals by identifying and developing the scope of work for these sectors.

**Transport Workgroup**
The Transport Workgroup serves the transportation travel segment by identifying and developing the scope of work for the air, car, rail and ground transportation verticals (travel sectors).

**Travel Integration Workgroup**
The Travel Integration Workgroup serves companies that provide services to the travel industry and other verticals that don’t functionally fit in either the Transport or Hospitality workgroups by identifying and developing the scope of work for common components and services that are used across multiple sectors such as travel insurance, package tours, dynamic packages and golf.

These work groups have developed specifications to assist in the exchange of millions of messages in the travel industry which use the OpenTravel schema. The following is a brief listing of the types of messages facilitated by OpenTravel specifications.

- Application Connectivity
- Booking Documents & Queues
- Check-Ins
- Customer and Partner Accounts

**OpenTravel Schema Products: Travel Segments**

Source: www.opentraveldevelopersnetwork.com

**OpenTravel Specification Guidelines**

- Openness
- Support of Exchanges Among a Broad Number of Parties
- Flexibility
- Extensibility
- Security
- Platform Independence
- International Scope
- Future Versions
Recent OTA Workgroup Accomplishments

**Architecture Workgroup**

After a two-year effort, the Architecture Workgroup officially launched the prototype 2.0 Candidate Release in April 2013. At the same time, a tooling project followed and the Model Build Project officially launched in September 2013. The code list optimization project started in September 2012 in which 149 tables have been simplified to date.

**Hospitality Workgroup**

The Hospitality Workgroup is working on the Hotel 2.0 Availability and Reservation project. This project aims to benefit the community by expanding the 2.0 model to fulfill the needs of both hotel availability search and hotel reservations. Working with the HEDNA Connectivity Workgroup and with support from Expedia and IHG, OpenTravel launched the Product Automation Project for Message Suite in 2014. This message set allows for the creation, modification and deletion of hotel products based on requirements.

**Transport Workgroup**

The Transport Workgroup published the Ground Transportation 2.0 Standard in 2017 to enable connectivity as it continues to provide specifications and tools to enable seamless end-to-end consumer experiences. This project group is not only for ground passenger transportation; but, also includes travel and leisure companies such as Amadeus, Travelport and City Rama. In addition, the Transport Workgroup recently completed the OpenTravel 2.0 Ground Transportation Availability and Reservation specifications for Taxis and Transfers.

**Travel Integration**

The Travel Integration Workgroup serves multiple sectors such as travel insurance, package tours and golf. OpenTravel 2.0 Golf Standard was released in May 2017. Major contributors to this specification were from companies such as Disney, Avis, Marriott, Golf USA Tee Time Coalition, Centry Golf, HTNG, LinksRez, National Golf Course Owners Association, National Golf Course Owners Association – Myrtle Beach Chapter, TinkeyWorks and Travelport. The specification allows golfers and partners to reach and book services easier and faster in various ways. For example, retrieving facility information, checking availability and making reservations. This specification is not only beneficial to those in the golf industry, but hotels and car rental companies will also benefit in assisting their guests to secure reservations.

As technology integration continues to progress, the possibilities of interoperability will continue to grow and functionalities will continue to be added to this list.
In the travel industry, there are multiple associations and organizations that are involved with the development and support of hospitality technology standardization. These organizations have all played a role in advancing the hospitality experience by enabling disparate technology systems to communicate with each other. Some organizations, such as OpenTravel, have a broad scope and encompass standards for multiple segments of the travel industry such as air, hotel, car, and tour operators. Other associations, like IATA or Gaming Standards Association (GSA), focus on a very specific segment of the hospitality industry. The following organizations have all made significant contributions in travel distribution and/or travel technology.

**OpenTravel Alliance (OTA) – www.opentravel.org**

The OpenTravel Alliance is a not-for-profit trade association, founded in 1999, whose primary goal is to develop specifications that make data transmission flow smoothly throughout the travel and tourism industry. The focus of the association is to create electronic message structures which facilitate communication between disparate systems. OpenTravel creates, expands and drives adoption of open universal data specifications, including but not limited to the use of XML, for the electronic exchange of business information among all sectors of the travel industry. OpenTravel is comprised of companies representing airlines, car rental firms, hotels, cruise lines, railways, leisure suppliers, service providers, tour operators, travel agencies, solutions providers, technology companies and distributors.

**Hospitality Financial and Technology Professionals (HFTP) – www.hftp.org**

HFTP, established in 1952, is an international, nonprofit association, headquartered in Austin, Texas, USA, with offices in Hong Kong, United Kingdom and the Netherlands. HFTP is recognized as the spokes group for the finance and technology segments of the hospitality industry with members and stakeholders spanning across the globe. HFTP uniquely understands the industry’s pressing issues and assists its stakeholders in finding solutions to their challenges more efficiently than any organization. It does this via its expert networks, research, certification programs, information resources and conferences/events such as HITEC. HFTP also owns the world’s only hospitality-specific search engine, PineappleSearch.com.

**Airline Tariff Publishing Company (ATPCO) – atpco.net**

The ATPCO was originally established as the Air Traffic Conference of Americas, which filed passenger tariffs. The organization took on its current status in 1975 after a reorganization. The ATPCO is the leader in airline fare, fare-related data distribution, and industry solutions. The information is collected from more than 400 airlines worldwide and distributed to global distribution systems such as Amadeus, Travelport, and Sabre; online travel agents (Expedia and ITA); and other computer reservation systems (CRS). ATPCO makes this process more efficient by permitting each airline to submit and distribute its information through our systems, thereby giving each CRS/GDS the opportunity for a single source of fare-related data. One of our unique features is an Automated Rules product. It permits a CRS/GDS to automatically load its pricing rule data tables without significant human intervention, thereby allowing new fares to be sold in the marketplace in the shortest possible time.

The mission of the organizations includes the following tenets:

- Lead the airline industry in defining standards and implementing industry solutions.
- Collect and distribute airline fare-related data, reliably and efficiently.
- Provide products and services that reduce distribution costs and protect or increase airline revenue.

**Gaming Standards Association (GSA) – www.gamingstandards.com**

The Gaming Standards Association (GSA) is an international trade association that creates benefits for gaming manufacturers, suppliers, operators and regulators. We facilitate the identification, definition, development, promotion, and implementation of open standards to enable innovation, education, and communication for the benefit of the entire industry. GSA has created award-winning standards that are in use today around the world, driving the industry to innovation and growth. Established in 1998, GSA’s members represent a wide cross section of the global gaming industry.
Hospitality Technology Next Generation (HTNG)  
www.htng.org
HTNG is a not-for-profit trade association formed in 2002 that fosters collaboration and partnership among hoteliers and technology providers to develop next-generation solutions. The goals of HTNG, as listed on the HTNG website, are as follows:

- To allow cooperating vendors to more easily integrate their products, and to jointly deliver and support them throughout the world.
- To allow cooperating hospitality companies to spread the burden of developing, maintaining, and operating common, non-strategic systems.
- To enable service-based providers to more easily integrate, deploy and support technology products from multiple vendors, so that hospitality companies can buy more complete solutions with fewer direct supplier relationships.
- To reduce requirements for onsite IT support at hospitality companies properties through central hosting of applications and remote monitoring and management of devices wherever feasible.
- To maximize the use of standard methods of systems integration, whether through ratified standards with certification, or through de facto adoption of common methods.
- To allow vendors and hoteliers to focus more of their R&D resources on innovation to drive competitive advantage, and less on “commodity” technologies. (www.htng.org)

In January 2017, HTNG launched the Next Generation Distribution Messaging Workgroup. This workgroup will review the connectivity of standards in the travel industry including the OpenTravel Alliance 2.0 object model and the International Air Transport Association’s (IATA) New Distribution Capability (NDC). According to the description of the workgroup on the HTNG website, “HTNG and The OpenTravel Alliance are mainstays of hotel and travel messaging and offer widely adopted message standards for operations and bookngs across a diverse ecosystem of partners and internally within many companies” (www.htng.org).

Hotel Electronic Distribution Network Association (HEDNA) - www.hedna.org
HEDNA, founded in 1991, is dedicated to enhancing hospitality distribution. HEDNA has several working groups examining the standards now. The Payments Forum is identifying the need for standards in interfaces, databases, regulations and privacy areas. The Content Working Group is working on the connectivity between hotel systems and distributors. As mobile becomes popular, there is also a special group to help mobile enter the hospitality industry and enhance the customer’s experience.

Hotel Industry Technology Integration Standards (HITIS)
Launched in 1996 by the American Hotel and Motel Association (now American Hotel and Lodging Association) to enable the creation of interface standards focused on CRS and property level systems. Contributions included significant adoption of standards prescribed by the lodging industry and product vendors. Eventually merged standards with OpenTravel on adoption of ebXML specifications by OpenTravel.

Hospitality Technology Strategic Initiatives Council (HTSIC)
HTSIC was a group spearheaded by HFTP and HTNG to address pressing industry needs as they relate to hospitality technology. The council worked to identify industry initiatives and determine processes for these initiatives in order to reduce duplicated efforts.

“Technological evolution is broad and wide-ranging, making it difficult to direct changes in a way that benefits the hospitality industry as a whole,” said Frank Wolfe, CAE, CEO of HFTP. “The council hopes to consolidate efforts and feedback from multiple resources so that we can address these changes in an organized fashion that benefits the industry.”

“The associations represented on the council rely entirely on voluntary contributions of time and expertise from our members,” said Douglas Rice, CEO of HTNG. “Coordinating through the council will help us ensure that all of the associations can leverage each others’ efforts, providing a greater ROI to the industry from our members’ efforts, and with less duplication.”

Council members included representatives from the following organizations:

- American Hotel and Lodging Association (AH&LA)
- American Resort Development Association (ARDA)
- Hospitality Financial and Technology Professionals (HFTP)
- Hospitality Information Technology Association (HITA)
- Hospitality Sales and Marketing Association International (HSMAI)
- Hotel Electronic Distribution Network Association (HEDNA)
- Hotel Technology Next Generation (HTNG)
- OpenTravel Alliance (OpenTravel)
**International Air Transport Association (IATA)**  
[www.iata.org](http://www.iata.org)

IATA is the trade association for the world’s airlines, representing some 275 airlines or 83 percent of total air traffic. The IATA supports many areas of aviation activity and helps formulate industry policy on critical aviation issues. In 2017, distribution and payment transformation is one of major priorities for IATA which consists of the following three major pillars:

- **New Distribution Capability (NDC):** NDC is an IATA-led initiative that is looking at providing passengers with personalized choice of products and services. This will be done through the definition of a messaging standard that will enable retailing opportunities through the indirect (GDS/travel agent) channel.

- **ONE Order:** ONE Order is the concept of a single Customer Order record, holding all data elements obtained and required for order fulfilment across the air travel cycle - such as customer data, order items, payment and billing information, fulfilment data and status.


**W3C – World Wide Web Consortium – [www.w3.org](http://www.w3.org)**

W3C is an international community that develops open standards to ensure the long-term growth of the Web.
40. PR Newswire (2004). OpenTravel Alliance Elects Board of Directors and Offices as it Enters Into 5th Year of Leadership In Development of Travel Industry Specifications. PR Newswire Association, June 7, 2004
As a committed hospitality finance or technology professional, you want to take the next step in your career. Elevate your professionalism and demonstrate your industry expertise with HFTP’s Certified Hospitality Accountant Executive (CHAE®) and Certified Hospitality Technology Professional (CHTP®) designations.

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