

A large, stylized flame graphic on the left side of the cover. It features multiple layers of flame shapes in shades of pink, red, and yellow, creating a sense of depth and movement. The flame appears to be rising from a bright light source at the bottom left.

HL7[®]

International

2020 ANNUAL REPORT

RE-ENVISIONING HL7





HL7 VISION

A world in which everyone can securely access and use the right health data when and where they need it.

HL7 MISSION

To provide standards that empower global health data interoperability.

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Walter Suarez, MD, MPH
HL7 International
Board Chair

Greetings Fellow HL7 International Members

2020 was the year when everything changed. On January 16, 2020, *The Economist* published its first article about a novel coronavirus coming out of Wuhan, China. By then, it had only been confirmed in 42 individuals and caused one death. A little over a year later, we are approaching 120 million cases around the world (with probably over 500 to 600 million more cases that have gone undetected), close to 2.5 million deaths, and it has affected every country, every sector of the economy, and our very way of life—how and where we work, study, eat and interact with each other.

The global pandemic put to test all our public health and healthcare systems in a manner we had never seen or experienced before. Countries struggled to define and put in place their own set of national policies to detect and contain the spread of the virus. Clinicians and epidemiologists struggled to understand the natural history of the disease and the best approaches to managing and treating patients at different stages of the disease. New tests were rapidly developed but were in short supply in many countries. Clinical research was fast-tracked to identify different medications that could help patients with the disease. Contact tracing was extremely challenging due to the sheer volume of daily new cases reported in any given jurisdiction. The world struggled with the social and economic effects of the new reality—social distancing (perhaps more appropriately referred to as physical distancing), use of masks, washing hands, cleaning clothes after a trip outside,

avoiding crowded places, restricted travel, closing of schools, and working and studying from home, to name a few. As we begin a new year, we are also beginning to see a brighter future ahead of us. The significant progress made thus far in the rate of vaccination—along with the start of spring, and reinforcement of public health containment policies in many places—is having a dramatic effect in the downward trend of the disease, even as we face new strains and variants of the virus.

I want to take a moment and pay tribute to all our frontline healthcare workers, and all other essential workers, many of whom are HL7 International members, who have helped us all throughout these trying times. Their commitment and dedication to saving lives and comforting those who suffer from this disease will never be forgotten.

This past year has demonstrated, perhaps more clearly than at any other time, the critical role that true global health IT interoperability plays in helping address the health information challenges we face, not only in response to a global pandemic, but across the entire public health and healthcare continuum. During this past year, we are proud to say that HL7 International has been actively working with the healthcare industry, government agencies, other standards development organizations, and international agencies and organizations to develop and implement effective and innovative mechanisms to capture and report timely information about COVID-19 cases and resources available in local communities.

The experience of 2020 exposed the need to re-envision *what we do, why we do it, and how we do it.*

In early 2020, the Board of Directors chartered the “Re-Envisioning HL7 International Initiative.” The initiative is anchored around five bold principles, as well as fifteen Board-approved priority recommendations. Guided by an Oversight Committee, the work is being done by ten different Task Groups.

What do we expect to see coming of this organization-wide effort? We see a re-envisioned organization that is more focused, agile, globally relevant, community-oriented and sustainable. We also see an organization that is more approachable from the outside; simpler to understand and participate in; efficient in its processes; effective in the delivery of its products and services; and that provides value to an expanded group of stakeholders. See pages 6-7 for our five bold principles—where we are and where we are going with this transformative initiative.



Re-Envisioning HL7 International: 5 Bold Principles

FOCUS

We believe that the future of HL7 is dependent upon the global development and adoption of HL7 FHIR® (Fast Healthcare Interoperability Resources). Therefore, we must focus our collective work on advancing and enhancing the HL7 family of FHIR products and services, to meet the industry's needs.

We know that HL7 FHIR does not fulfill or is necessarily the best or most appropriate approach for every possible health information exchange situation. HL7's other families of standards, including Version 2 (V2), Version 3 (V3) and CDA® (Clinical Document Architecture), are mature, widely used in specific domains and by several countries, and form the foundation of many healthcare systems—particularly in the US—where some of these standards have been adopted via federal regulations. Thus, we expect to see support for future development of implementation guides to address maintenance issues, correct errors or handle changes needed due to regulations using the existing, adopted base standards, but hold on development of future releases of the base standard. More clarification of this direction is being provided by the corresponding Task Groups, with input from internal working groups, such as Structured Documents, as well as the Technical Steering Committee.

GLOBAL RELEVANCE

2020 has demonstrated the imperative for global health data interoperability. As we look at the role HL7 International plays globally, we see the need to enhance, expand and embrace our global communities (or international footprint) and shift away from the perceptions and realities that HL7 is too US-centric. We are pursuing five critical pathways in support of this principle:

1. Enhance the relationship that HL7 International has with its affiliates and strengthen the critical role that HL7 affiliates play in their respective countries
2. Explore opportunities to expand our global presence through regional, multi-country efforts such as our HL7 Europe organization—which is celebrating its 10th anniversary this year
3. Increase the number and depth of our partnerships with global and regional organizations, such as the Global Consortium for eHealth Interoperability (jointly with HIMSS and IHE International), the Gemini Project (with IHE International), the World Health Organization, Pan-American Health Organization, World Bank, Interamerican Development Bank, as well as global corporations, such as Google, Microsoft, Apple, Amazon, and Facebook
4. Expand the impact of HL7 special projects—such as the HL7 Accelerators™—in the global stage. One such opportunity is the value that the Gravity Project could bring at a global level, considering that Social Determinants of Health are not unique to any country or region
5. Integrate into our 2021-2022 global policy advocacy strategy specific opportunities to advocate for national government policies to support the adoption of HL7 standards in many countries, in partnership with our International Council and HL7 affiliates

FOCUS

GLOBAL RELEVANCE

AGILITY

SUSTAINABILITY

COMMUNITY



AGILITY

Moving quickly, efficiently, effectively and decisively is the hallmark of a modern international standards organization. By its nature, and as an accredited standards organization, HL7 has developed many different policies and procedures, multiple work groups, tools and resources, and other structures that has made us a complex organization. This has caused us to be difficult to navigate from the inside, and not very approachable from the outside. However, during this past year, we responded to the pandemic by demonstrating the need for, and ability to become more agile and develop, from start to end, new standards in record time. To ensure that we become a more agile, approachable and efficient organization, significant work has been done over the past year by our CTO, guided by the Technical Steering Committee (TSC) and work group co-chairs, to simplify many internal processes and workflows, reduce structures, maximize the benefits of online procedures, and become more efficient and embrace the principles of essentialism. I am pleased to report that many of these changes have already been adopted, and more are expected in 2021. HL7 International must focus on **outcomes** and less on processes.

SUSTAINABILITY

Ensuring stable, predictable, and diverse funding is critical to achieving our vision and mission. Our current funding streams are not sufficient to adequately address the existing and future needs of the organization, such as advancing HL7 FHIR, achieving global relevance, and reaching a larger community. HL7 needs to maximize existing funding sources and identify new sources to advance our vision and mission. Work is being done by our task groups to define a short-term and long-term sustainability strategy that will help us achieve this important goal.

COMMUNITY

As a member-based organization, we greatly depend on our community of standards developers, clinical, technical, and business experts, and others to continue to develop and maintain our standards, products and services. We must also increase our outreach and actively engage other communities—such as implementers, consumers, national governments—to ensure the continuum of standards lifecycle: from development to testing, evaluation, adoption, maturation, curation, enhancement, and optimization. We are looking forward to welcoming new communities to HL7 International.

What's Next?

The work of our task groups will focus on the following items:

- Defining and refining the Board-approved recommendations
- Identifying the core outcomes expected under each of these recommendations
- Defining specific action plans with key milestones and timelines for the initial, intermediate and long-term steps to be taken by the organization
- Detailing the resources needed and cost implications for the recommended changes

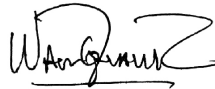
We will also continue to engage our communities at large through frequent communications, informational forums, targeted surveys, discussion with our various internal leadership groups (including the TSC, work group co-chairs, International Council, and other councils, boards and committees) to ensure people are well informed, engaged, and contributing during this transformative journey. We invite everyone to frequently check for periodic announcements on our *Re-Envisioning HL7* Confluence page at <https://confluence.hl7.org/display/RH/Re-Envisioning+HL7+Home>

In Closing

We are in the midst of unprecedented times. But we are resilient and see in the start of this new year the hope for a better and brighter future. As the world continues to change, we remain committed to our vision and mission to provide standards that empower global health data interoperability.

I want to thank you all for your ongoing support of HL7 International and look forward to continuing to work together in helping our organization be a beacon for interoperability worldwide. I wish you all the very best for a safe, healthy and prosperous 2021.

Be well,



Walter Suarez, MD, MPH

CEO REPORT

We could not look back upon the accomplishments of HL7 in 2020 without recognizing the extraordinary impact of the COVID-19 global pandemic.



Charles Jaffe, MD, PhD
HL7 International
Chief Executive Officer

Since the World Health Organization first reported identifying the virus in December 2019, there have been nearly 109 million case and nearly 2.4 million deaths worldwide (according to the Johns Hopkins Coronavirus Resource Center). On every continent there has been increasing demand to share critical data. Government agencies struggle to maintain privacy and security, competing with the need to maintain transparency and liquidity.

Within the HL7 community there was an important need to adapt to the ever-changing environment, both in healthcare and information technology. We faced the challenge of meeting the demands of remote working group meetings, connectathons and technical training. Remarkably, we met those obstacles with ingenuity and commitment. HL7 has forged a better place despite the growing toll on our citizens and the strain on our healthcare systems.

The Re-envisioning Initiative

FOCUS

GLOBAL RELEVANCE

AGILITY

SUSTAINABILITY

COMMUNITY



HL7 began 2020 with the framework of a remarkable Re-envisioning initiative. With a commitment from the Board of Directors, the initiative grew in scope and purpose. As described in detail in the chair’s annual report, five major principles helped us define a vision for the coming year and for the decade ahead. Broadly

speaking, these principles include: Focus, Global Relevance, Agility, Sustainability, and Community. Each one is defined by a commitment to enabling more efficient use of our human and fiscal resources. The progress that is demanded of us and the efforts required will change the organization, sometimes slowly and sometimes boldly.

It is certain that the standards we create must lead to a more efficient delivery of healthcare and research information that keeps pace with the innovation in other industries. With HL7 FHIR® (Fast Healthcare Interoperability Resources), for example, we have begun to emulate the approach to data access that has helped the banking, travel, communications and other industries thrive. In the CTO report, we learn of the tools that we have adopted, implemented, and developed to enhance our standards processes and communication. In the coming year, we will see much of the fruit of that labor.

To some, change management is simply a tool of the business community to foster streamlined process, but HL7 is driven by a communication strategy that does more than simply inform. To be successful, these cojoined efforts must rely upon the capabilities and commitment of the entire HL7 community. To be certain, this process includes the HL7 membership on a global scale. The re-envisioning initiative is driven by a commitment to bring a global organization closer to the ideals for which it was conceived. Too long, we have simply spoken about an international organization which supports the seamless exchange of health data across national boundaries. Now, there is a critical effort to truly make the community a global one.

HL7 FHIR ACCELERATOR™ Projects



The HL7 community is a growing one. For more than two decades, we were focused on the development of standards, with only limited regard about their implementation and the requirements of the ultimate end user. The success of the Argonaut Project and the growth of the HL7 FHIR Accelerator Program have dramatically shifted that emphasis.

Three years ago, the Argonaut FHIR implementation guide was integrated into the Apple iOS. This led to a remarkable change in the means by which patients could aggregate their health data onto a single platform,



regardless of the source of the information. Today, over 300 US health systems have leveraged that capability. In addition, the implementation guides of other Accelerator programs have been recognized in US regulation.

The HL7 FHIR Accelerator Program, initially led by Dr. Micky Tripathi, now National Coordinator for Healthcare IT, has grown to include diverse communities.



In addition to Argonaut, the Da Vinci Project, first conceived to enable value-based care by connecting payers and providers, has grown in its remit and in its influence. In fact, Da Vinci implementation guides are extensively named in regulation.

Da Vinci 2020 Multi-Stakeholder Membership



*Indicates a founding member of the Da Vinci Project. Organization shown in primary Da Vinci role. Many members participate across categories.

For current membership: <http://www.hl7.org/about/davinci/members.cfm>

In parallel, the CARIN Alliance, which was created to provide patient access to payment systems, has been instrumental in the development of the Blue Button 2.0 concept. Moreover, CARIN is challenging the traditional paradigm by enabling cost transparency.



More recently, the CodeX Project has helped to align the traditional demands of cancer care and research into a program that streamlines the exchange of data among the diverse and previously disconnected end-users. Today, fewer than 3% of oncology patients are enrolled in clinical trial, which is a challenging hurdle that CodeX is determined to overcome. In addition, the project has developed mCODE™ (the minimal Common Oncology Data Elements), a unique contribution to accelerating patient care and clinical research.



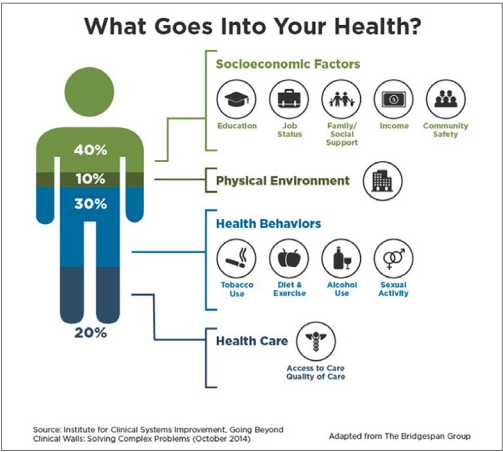
With the recognition of the dramatic impact of the social determinants of health (SDOH), the Gravity Project was conceived to make data more valuable and provide integration into the clinical workflow. The initial aim of the project was the definition of data elements and value sets to describe social determinants. As the project moves into its second phase, the more than 1800 organizations that support this effort are committed to translating these efforts into broad implementation for expansion of FHIR capability.



The newest and one of the most ambitious FHIR Accelerator programs, is the Vulcan Project, which is committed to integrating clinical data and research needs to enable a truly virtuous learning health system. While Vulcan has a broad and ambitious remit, it has garnered support from international biopharma, US Federal agencies (Food and Drug Administration and the National Institutes of Health) and is committed to advancing the landscape of both regulated and non-regulated global research.



In the coming year, we expect to see the emergence of at least one additional Accelerator, as the multiple and complex demands of coronavirus patient care, device and vaccination management and population health strain our information systems.



The Gravity Project convenes multi-stakeholder groups from across the health and human services sectors through an open and transparent collaborative process where they develop and test consensus-based standards to facilitate social determinants of health (SDOH) data capture, exchange, and use across a variety of systems and settings of care as well as social services.

HL7 Europe Celebrates 10 Years

The most ambitious efforts of HL7 are played on a global stage. With affiliate programs in over 30 countries, HL7 supports the national and regional needs of a diverse community. Led by the International Council, these efforts are displaying a unique and often profound effect. Now in its tenth year, the HL7 Foundation and the European Office of HL7 work to promote the health and healthcare systems of a broad European community. Working in collaboration with other governmental and non-governmental organizations, the office has provided leadership in the exchange of healthcare information across borders. Ultimately, this will drive an open and roundly demanded exchange of critical data throughout Europe.

Expanded Community Reach

We have also begun to recognize the needs of growing communities of providers and patients, ambitiously defined by the Patient Empowerment Work Group. At the vital flexion point of clinical care decision making, professional medical societies have swelled interest in the capabilities of FHIR for disease registries, clinical decision support, genomic integration, and prior authorization. This led to the vital uptake of FHIR in other communities worldwide.

Much of this growth has been supported by an expanding global commitment to HL7 education and training. The success of these programs is not limited to the traditional workforce that had been attracted to HL7. Although these groups once seemed distant to the expectations of the traditional HL7 members, there has been a new focus on populations of individuals who are

demanding that research, populations health, and social determinants comprise an integral component of our training plans.

HL7 Collaborations

The success of HL7 could not have been anticipated without the fundamental dedication to collaboration. Not only have we begun to see gains in our collaborative initiatives with global SDOs (ISO, CEN, ICH, and GS1 to name a few), but we have expanded our reach to other communities. The Gemini Project (an international collaboration among HL7, HIMSS, and IHE) promises to deliver on a broad platform of standards development, integration, and implementation. There is also promise of increased cooperation with GDHP (Global Digital Health Partnership), now supported by over 30 countries. In addition to the policy efforts, plans are underway for a highly anticipated collaboration between ODHSI (Observational Health Data Sciences and Informatics) and HL7 to support the much-needed integration of OMOP (Observational Medical Outcomes Partnership) Common Data Model and FHIR.

In Conclusion

The Re-envisioning Task Groups have an arduous path to realizing the goals of the Re-envisioning Initiative. Their leaders are committed to a challenging timeline of delivering on those bold principles in the coming years. There is little expectation that all of the goals will be achieved by year's end. Through commitment, passion, and innovation, we will view 2021 as a transformative year for HL7.

Stay well,



Charles Jaffe, MD, PhD

HL7 COLLABORATES

HL7 formally collaborates with many organizations across the industry. The organization currently holds formal agreements with the groups below.

American Dental Association (ADA)	Digital Imaging and Communication in Medicine (DICOM)	Pharmaceutical Users Software Exchange (PhUSE)
American Hospital Association (AHA)	GS1	Regenstrief/Logical Observation Identifiers Names and Codes (LOINC)
American Medical Informatics Association (AMIA)	Health Information Management Systems Society (HIMSS)	Smart Open Services for European Patients (epSOS)—European eHealth Project
America’s Health Insurance Plans (AHIP)	International Conference on Harmonization (ICH)	SNOMED International
American Society for Testing Materials (ASTM)	International Organization for Standardization (ISO)	The Sequoia Project
CEN/TC 251 (European Committee for Standardization)	Logica Health (Formerly HSPC)	TransCelerate
Council for Affordable Quality Healthcare, Inc. (CAQH)	National Council for Prescription Drug Program (NCPDP)	Web3D Consortium
Clinical Data Interchange Standards Consortium (CDISC)	OASIS	Workgroup for Electronic Data Interchange (WEDI)
	Object Management Group (OMG)	



Vital Signs

As in prior years, HL7's volunteer community produced a wealth of new and updated standards in support of HL7's mission to provide standards that empower global health data interoperability:

- 18 ANSI standards recognized (including reaffirmations)
- 15 normative publications
- 5 technical corrections/errata
- 16 Informative publications
- 35 new STU releases, 3 STU updates and 19 STU extensions

In addition to these publication milestones, HL7 also initiated or continued many other projects:

- 59 standards-related projects run by HL7 volunteers (without contractual support)
- 14 contracts funded from the HL7 tooling budget—including new contracts or amendments to ongoing projects
- 45 new government-funded contracts or amendments to ongoing contracts

While 2020 was another busy year, 2021 will likely exceed those numbers.



Wayne Kubick
Chief Technology Officer
HL7 International

CTO REPORT

After years of incremental progress in retooling and revitalizing HL7 processes, a number of the seedlings planted in past years are beginning to expand into a garden of fulfillment.

In the 2019 annual report, I predicted that 2020 would be a tipping point in HL7's evolution. Little did I realize how abruptly things would actually tip. In the weeks before our Sydney, Australia WGM in February 2020, the talk was all about the fires devastating the Australian landscape and atmosphere. By the time we arrived, we were just beginning to consider the implications of another, greater threat to our respiratory systems—Covid-19. Sydney would turn out to be my last business trip of 2020 and led into a pivotal year unlike any other in HL7's prior 30 plus years of existence.

By March, it was already becoming clear that we, along with the rest of the world, would have to adapt to new ways of working. While HL7's community was already used to working remotely via conference calls, we made a major decision to invest in Zoom as our standard web meeting platform. We scrambled to renegotiate our hotel contracts since it became clear that in person meetings were not going to be an option in 2020 and 2021. And while we retooled for this expanded virtual way of working, we cancelled our May WGM—though we still held a FHIR connectathon and many work groups persisted in meeting virtually anyway. In June, together with our Firely partners,

we identified a new virtual meeting tool, Whova, which (along with Zoom) became the platform for our DevDays USA Virtual meeting. We had a few bumps along the way adapting to the new technologies, but still put together a smashing success of a meeting. There was also the benefit of potentially reaching even more people than would have been possible had we met in person in Cleveland. By our September WGM, we became even more adept at virtual connectathons and conferencing, positioning us for the ongoing virtual world of 2021. While we greatly miss our former in person gatherings, we weathered this first stormy year of the pandemic with creativity, resilience and increased camaraderie. The pandemic emphasized more than anything else how critical HL7's work to improve global interoperability was to the future of us all. Though Covid-19 forced us to stay distanced, in many ways it also brought us closer together as a global community.

Nevertheless, while the world around us struggled to adapt to a devastating new reality, we at HL7 persisted in our path toward positioning our infrastructure, tooling and processes for what will be a critically important future of ongoing growth and challenges.

ONC Triples Number of Contracts with HL7

In 2018, an ONC five-year grant to support development and adoption of HL7 FHIR® (Fast Healthcare Interoperability Resources) and C-CDA (Consolidated Clinical Document Architecture) made it possible for us to implement and continue enhancing many of our recent tooling and process improvements to develop, publish and maintain critical standards for the US Realm.

This has already made a huge difference to HL7, and 2020 introduced two new funding vehicles. A new four-year grant is funding new or updated standards projects to improve pandemic response in multiple areas such as Covid-19 clinical data representation, public health, social determinants of health, security and privacy, as well as exploring use of natural language processing to extract relevant Covid-19 structured data from clinical notes.

While this will help us close gaps in our standards to better prepare us for future public health challenges, a separate five-year ONC contract is now in place to help take HL7 to another level in the the management, coordination, communication and visibility of standards development and adoption. The contract will ensure we keep the US Core FHIR Implementation Guide (IG) and C-CDA aligned with USCDI (United States Core Data for Interoperability) updates. It will also allow us to further invest in tracking databases, visualization and analytic tools, data management, stewardship, and support of necessary components such as profiles and value sets.

Tooling Highlights

In 2020 we continued to improve the scalability, reliability and capabilities of the FHIR IG Publisher, refactoring the code base to improve long term sustainability. We introduced templates to support creation of online FHIR specs for use by affiliates and partners. We added an improved validator tool. The publisher was adapted to support a new publishing paradigm for C-CDA (and potentially CDA) and to serve as the engine that generates HL7 Terminology created through the new Unified Terminology Governance (UTG) process, which was finally moved into production use in 2020.

UTG has now fully replaced the former harmonization process and provides the standard platform for managing all HL7 terminologies. In 2020, the UTG team issued the first two production releases of terminology.hl7.org, which already includes thousands of code systems and value sets.

In addition, we completed our migration to Confluence as our single source of truth for making essential information available to the working group. We set up Confluence Wiki spaces for all committees, created a new Essentials page that summarizes and links to information about basic processes, guidelines and checklists for operating at HL7, and released an updated, redesigned online Co-Chair Handbook. We also developed an Accelerator home page to help new HL7 participants from the FHIR Accelerators hit the ground running.

JIRA is now our standard tool for recording all specification feedback, replacing the former STU feedback web page. We will be piloting a new ballot system based on JIRA in early 2021, continuing to leverage our core tool suite to make it easier to accomplish basic tasks at HL7 in familiar ways.

Simplification and Essentialism

By now, you've all been repeatedly reminded of my belief in focusing on simplicity and essentialism. While HL7 has produced more than 400 standards over its lifetime, having so many standards to choose from is not always a benefit; rather, it can be a burden on the healthcare ecosystem and stakeholders. A prime objective should be to help people navigate thru the tortuous list of global standards and concentrate their precious time on the most meaningful set for their business needs.

As the world moves toward a more tightly integrated future based on APIs, some of the traditional boundaries between HL7 work groups began to blur, further confounding effective communication and collaboration. The challenges were multiplied by the continued rapid growth in global use of FHIR and the expansion of the Accelerator program, which is stretching scope and generating many more IG projects than in the past. These factors, together with a pre-requisite goal to try to make HL7 processes less burdensome on volunteers, have continued to drive both new and ongoing initiatives and projects.

One fundamental commitment is to simplify administrative form processing and approvals and reduce or eliminate the historical dependence on email attachments. We introduced a new lightweight project proposal process to increase awareness, attract participants and gather input on proposed new work before we sunk in too much time. While we didn't hit our target of introducing the new Project Scope Statement workflow

process in 2020, we did begin a pilot early in 2021, with the expectation that approvals will be completed typically in a matter of weeks rather than months. We will continue to adapt other forms to the workflow process in 2021, which not only speeds administrative approvals but also offers expanded insight into the current state of each document within the process.

Toward this end, we introduced important web features. We created the standups.hl7.org RSS feed to provide a chronological listing of all publications with easy, intuitive search functions. More recently we introduced the new C-CDA viewer which helps implementers and end users easily navigate thru the C-CDA specification and Companion Guide, providing easy access to templates and a handy way to look up conformance warnings.

While my first five years understandably concentrated on doing more, a theme for 2021 is to do try to reach the point where we can actively do less—to change the focus to finishing rather than starting—finally moving HL7 toward a more stable environment where our principal attention will be on continuous improvement. A corollary of that theme is to work more consistently toward deprecating, archiving or clearing out much of the voluminous body of past work that may no longer be as timely, accurate, relevant or critical toward advancing interoperability for the next decades. We want to get people the right, current information they need with as little effort as possible. This means we also have to archive or remove what's inaccurate, inconsistent, obsolete or of little relevance to what our community really needs.

CTO REPORT

Strategic Collaborations

It is impossible to truly advance global interoperability without extensive collaboration, and as FHIR spreads into new communities and countries, HL7 continues to expand its relationships with other partner organizations to help achieve our common goals.

We continued the Gemini initiative with IHE in 2020, focusing on shared capabilities (like IG publishing and connectathons).

We also joined a new collaboration with IHE and HIMSS known as the Global Consortium for eHealth Interoperability. HL7 is working with the International Standards Organization (ISO) to establish a new partner SDO relationship, and we expect to announce this and several other key collaborative agreements in 2021.

Looking Forward to 2021

2020 was a black swan, but it also spurred much progress and stimulated new opportunities. With ongoing ONC support, we expect to see many more improvements to our tooling and process.

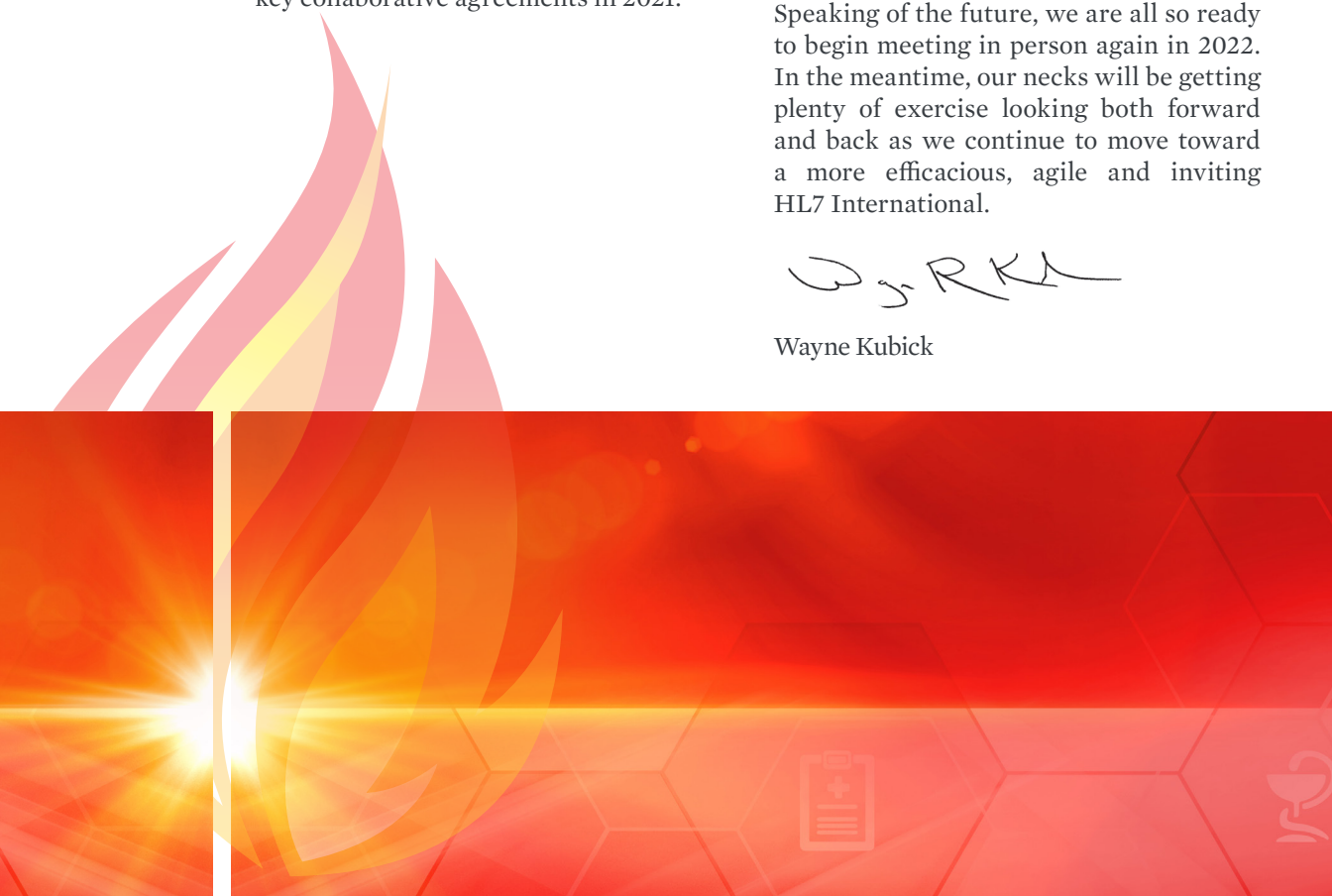
We also will continue working to modernize our ballot systems and will be commencing a major project to replace the association management system that manages membership, customer relations and HQ operations.

Completion of these and other ongoing key projects should alleviate the most glaring remaining pain and risk areas facing the organization, and position HL7 for years of future growth.

We'll still be seeking to leap ahead, but also looking to hold steady for a while. Speaking of the future, we are all so ready to begin meeting in person again in 2022. In the meantime, our necks will be getting plenty of exercise looking both forward and back as we continue to move toward a more efficacious, agile and inviting HL7 International.



Wayne Kubick





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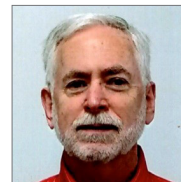
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TREASURER REPORT



By Floyd Eisenberg, MD
*HL7 International
Board Treasurer*

2020 was a positive year for HL7 from a financial perspective.

Meetings

The year began with a successful face-to-face meeting in Sydney, Australia after which the COVID-19 pandemic caused major health, economic and personal disruption worldwide. HL7's leadership and management staff were able to respond quickly to renegotiate our meeting contracts to minimize cancellation and rescheduling penalties. We were able to successfully move our May FHIR Connectathon to a virtual event and subsequently held highly successful virtual FHIR DevDays, an additional FHIR Connectathon and September Working Group Meeting (WGM). Income from WGMs had the expected net loss for the February 2020 meeting in Australia, and the May WGM was cancelled due to the pandemic. However, the September 2020 Plenary and WGM showed an 12% increase in net income compared to 2019. Attendance at the May and September FHIR Connectathons increased 69% and 32%, respectively; revenue from these events increased 11% and 42%, respectively. The June FHIR DevDays meeting had a corresponding 15% increase in attendance, although revenue decreased by 71%.

Education

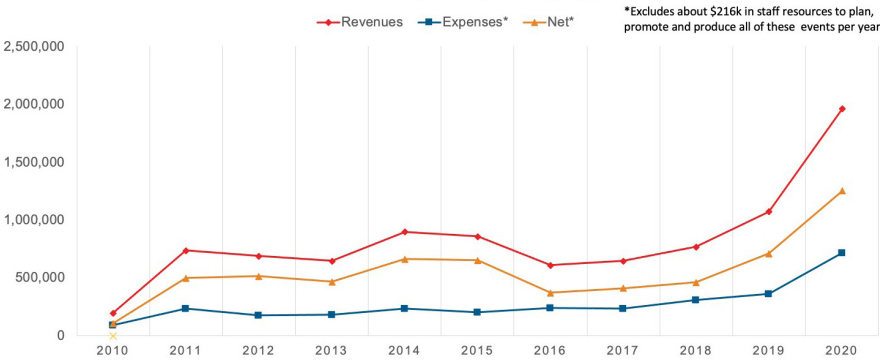
Revenue and net income from education has grown by 41% with greater attendance in approximately the same number of events over the prior year. While revenue and net income from certification testing and onsite workshops has decreased (note the lack of onsite workshops during the pandemic),

distance learning activity net income increased by 15%. Figure 1 shows revenues from distance learning, onsite workshops, certification and testing webinars. This report is based on of year end results prior to final auditing. Investment results for 2020 show a net 13% yield.

Membership

Organizational membership shows only a slight (3.8%) decline from 2019 with an increase (4.8%) in individual memberships. Organizational and individual membership revenues have continued to increase (2% and 13% over 2019, respectively) with a 2.4% total increase in membership revenue compared to 2019. The trend over the past six years of year-by-year reduction in organizational members continues to stabilize and individual memberships have started to recover from decline experienced through 2019. Revenues from individual memberships are proportionally small relative to total membership revenues, most of which represent organizational memberships. In 2020, membership revenues were \$204.4k more than budgeted, with positive budget variances for organizational memberships or \$183.2k and for individual memberships \$21.2k. Increased interest and activity with FHIR and participation of FHIR Accelerators seem to have stabilized membership, although HL7 membership among FHIR Accelerator participants varies.

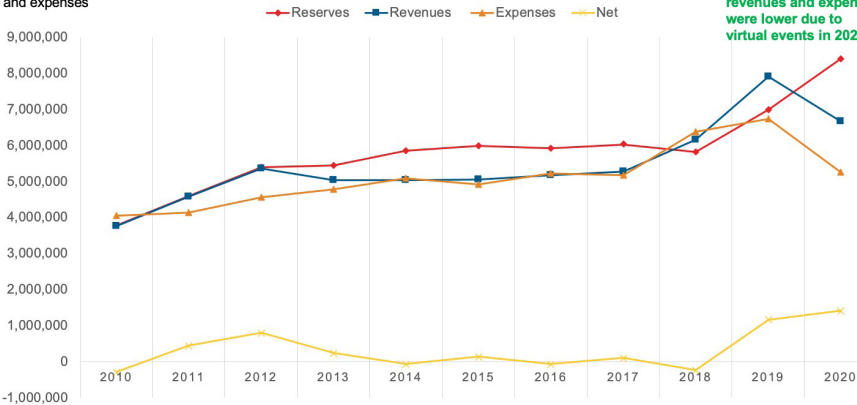
RECORD-SETTING REVENUES FROM DISTANCE
LEARNING, ONSITE WORKSHOPS, CERTIFICATION
TESTING AND WEBINARS



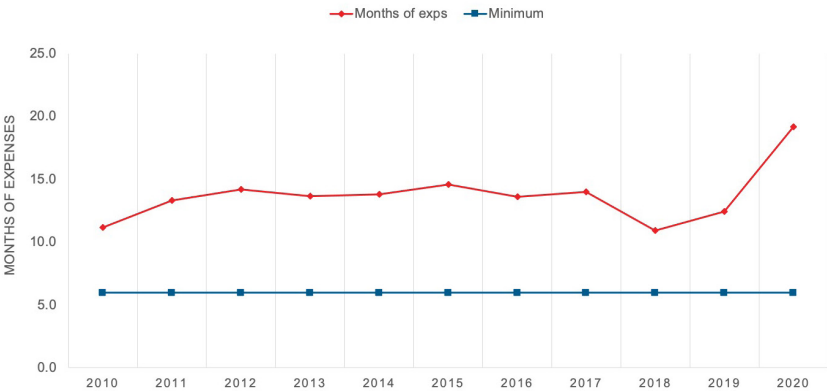
NOTE: Excludes ONC, DaVinci & Argonauts pass thru funds and expenses

HL7 FINANCIALS OVER TEN YEARS

All-time record high of reserves; though revenues and expenses were lower due to virtual events in 2020



HL7 RESERVES IN MONTHS OF EXPENSES



The Organization

The current global pandemic caused HL7, like many organizations, to look carefully at our focus, global relevance, agility, sustainability and our community. The HL7 Board established a Re-envisioning effort to address each of these areas to address our organization moving forward. While the pandemic brought many personal and business challenges, HL7 has been fortuitous in that membership and participation has remained strong. Although revenue has been under budget, expenses have decreased a much greater amount to yield a positive result in net operating income and reserves. The preliminary unaudited year-end operating revenue projection for 2020 is \$6.7 million, which is \$0.24 million, or 3% over budget. However, the unaudited expenses for 2020 are \$5.3 million, 26.5% under budget. Preliminary net operating income is \$1.65 million, which is \$1.65 million better than the budgeted loss. The preliminary pre-audited 2020 year-end financials projects cash reserves of \$8.4 million that equates to 17.42 months of operating expenses. Figure 2 shows HL7's financials over the past 10 years. Figure 3 displays changes in our reserve funds in months of expenses over the past 10 years.

Einstein's three rules of work¹ are:

1. Out of clutter find simplicity;
2. From discord find harmony;
3. In the middle of difficulty lies opportunity."



A portrait on a Jersey, England postage stamp of Albert Einstein, whose "three rules of work" provide guiding principles to the HL7 Re-envisioning effort.

In 2020 we found clutter and confusion and we (HL7) emerged finding opportunity. The world that emerges from this pandemic will be significantly different from the one we knew before. We anticipate valuable strategic initiatives from the HL7 Re-envisioning effort to help us navigate to continued success and sustainability.

Respectfully submitted,

Floyd Eisenberg, MD

¹ John Archibald Wheeler. Interview in Cosmic Search, Vol. 1, No. 4 (Fall 1979). Available at: <http://www.bigear.org/vol1no4/wheeler.htm>.

HL7 INTERNATIONAL COMMITTEES AND WORK GROUPS

Affiliate Due Diligence	FHIR Infrastructure	Patient Empowerment
Architectural Review Board	FHIR Management Group	Payer/Provider Information Exchange
Arden Syntax	Financial Management	Pharmacy
Biomedical Research Integrated Doman Group	Governance and Operations	Policy Advisory Committee
CDA Management Group	HL7 Foundation Task Force / Advisory Council	Public Health
Clinical Decision Support	Imaging Integration	Publishing—Electronic Services and Tooling
Clinical Genomics	Implementable Technology Specifications	Recognition and Awards
Clinical Information Modeling Initiative	Infrastructure and Messaging	Security
Clinical Interoperability Council	International Council	Services Oriented Architecture
Clinical Quality Information	Leadership Development and Nominations Committee	Standards Governance Board
Community-Based Care and Privacy	Learning Health System	Structured Documents
Conformance	Mobile Health	Technical Steering Committee
Cross-Group Projects	Modeling and Methodology	Terminology Authority
Devices	Orders and Observations	US Realm Steering Committee
Education	Patient Administration	V2 Management Group
Electronic Health Records	Patient Care	Vocabulary
Emergency Care		



Membership Milestones

We are pleased to recognize HL7 affiliates who have been in operation for more than 20 years and individuals who have supported HL7 for more than 25 years. We sincerely thank the following for their incredible contributions to the industry and dedication to HL7.

HL7 AFFILIATES IN OPERATION FOR MORE THAN 20 YEARS:

HL7 Australia
HL7 Canada
HL7 Finland
HL7 Germany
HL7 Japan
HL7 Netherlands
HL7 New Zealand
HL7 UK



HL7 MEMBERS FOR 25-29 YEARS:

Hans Buitendijk, FHL7
Albert Edwards
Ted Klein, FHL7
Virginia Lorenzi, FHL7
Charles Meyer, FHL7
Doug Pratt, FHL7
John Santmann, MD
Mead Walker, FHL7

HL7 MEMBERS FOR MORE THAN 30 YEARS:

Gary Dickinson, FHL7
W. Ed Hammond, PhD, FHL7
Clem McDonald, MD, FHL7

EXECUTIVE DIRECTOR REPORT



Mark McDougall
HL7 International Executive
Director



HL7 Members relax together at the 2020 Sydney, Australia Working Group Meeting

HL7 is dependent upon the service of hundreds of key members who drive the organization forward.

Membership Report

HL7 had 1,501 members as of December 31, 2020 as compared to 1,483 one year earlier. There were modest gains in both the Benefactor and Gold levels of membership; we gained five new Benefactors, bringing the total to 30, compared to 25 at the end of 2019. Gold membership rose from 89 in 2019 to 93 in 2020.

Individual Memberships

As of December 31, 2020, HL7 had a total of 125 individual members, which represents a slight gain over 119 total individual members one year earlier.

Organizational Memberships

There were 404 organizational member firms on December 31, 2020, as compared to 420 at the end of 2019. In 2020 there were 60 new organizational members and 54 organizational reactivations. This compares to 59 new organizational members and 53 organizational

reactivations in 2019. For the year, there was a net decrease of 16 in organizational memberships which compares to a decrease of 16 during 2019 and nine in 2018.

International Affiliate Members

Global participation in HL7 remains strong. There were 40 countries with active HL7 affiliates in 2020 including the following: HL7 Argentina, HL7 Australia, HL7 Austria, HL7 Belgium, HL7 Bosnia and Herzegovina, HL7 Brazil, HL7 Canada, HL7 Chile, HL7 China, HL7 Croatia, HL7 Czech Republic, HL7 Denmark, HL7 Finland, HL7 France, HL7 Germany, HL7 Greece, HL7 Hong Kong, HL7 India, HL7 Italy, HL7 Japan, HL7 Korea, HL7 Netherlands, HL7 New Zealand, HL7 Norway, HL7 Pakistan, HL7 Philippines, HL7 Poland, HL7 Portugal, HL7 Romania, HL7 Russia, HL7 Saudi Arabia, HL7 Singapore, HL7 Slovenia, HL7 Spain, HL7 Sweden, HL7 Switzerland, HL7 Taiwan, HL7 UAE, HL7 UK, HL7 Ukraine.

2020 Volunteer of the Year Award Winners



Michael Brody, DPM



Mike Davis



Lindsey Hoggle

Membership Recognition

Volunteers of the Year

We were pleased to recognize three incredible volunteers for their dedicated service to HL7. This year marks the 24th year that we have recognized such individuals via the W. Ed Hammond, PhD HL7 Volunteer of the Year Awards. The recipients of the 2020 HL7 Volunteer of the Year Awards included:

- Michael Brody, DPM, president and CEO, TLD Systems; CEO, CMEonline.com
- Mike Davis, security architect, Department of Veterans Affairs
- Lindsey Hoggle, managing partner, owner and senior consultant, Health Project Partners, LLC

We are honored to recognize Michael, Mike and Lindsey as dedicated individuals who have made significant contributions on many fronts, including in specific HL7 work groups and throughout the larger HL7 global organization. Their efforts and contributions are sincerely appreciated, and this recognition is well-deserved.

HL7 Fellows Class of 2020

The HL7 Fellowship program recognizes individuals with outstanding commitment and sustained contribution to HL7 with at least 15 years of active membership. During HL7's 34th Plenary meeting, HL7 honored the following well-deserving members with distinction as HL7 Fellows in the Class of 2020:

- Rita Altamore, MD, USA
- Mike Davis, USA
- William Goossen, PhD, Netherlands
- Susan Matney, PhD, RN, USA
- Rob Snelick, USA
- Sylvia Thun, MD, PhD, Germany
- Grant Wood, USA

Newly Elected Board Members



Chair Elect

Andrew Truscott



Secretary

Virginia Lorenzi



Director

Lenel James



Director

Janet Marchibroda



Affiliate Director

Diego Kaminker

Board Election Results

The new year of 2021 will bring HL7 new members of the HL7 Board of Directors. Other than the Chair-elect position, the new Board members will serve two-year terms from January 2021 through December 2022.

- Chair-elect: Andrew Truscott, global health lead, technology at Accenture, was elected by the membership to serve as the chair-elect in 2021 and as the board chair, 2022-2023
- Secretary of the Board: Virginia Lorenzi, senior technical architect, HIT standards, New York-Presbyterian Hospital
- Director: Lenel James, business lead, health information exchange and innovation, Blue Cross Blue Shield Association

- Director: Janet Marchibroda, president, Alliance for Cell Therapy Now
- Affiliate Director: Diego Kaminker, owner, Kern-IT SRL and member, HL7 Argentina

We are pleased to congratulate these individuals for their commitment and valued service to HL7 as members of the HL7 Board of Directors.

Three additional board members have been appointed, including the following:

- Lori Evans Bernstein, MPH, Co-founder and President, HealthReveal
- Karen DeSalvo, MD, MPH, Chief Health Officer, Google Health
- Carolyn Petersen, MS, MBI, FAMIA, Senior Editor, Mayo Clinic



Scenes from the February 2020 Working Group Meeting in Sydney, Australia.



Meetings & Education Report

February WGM in Sydney

About 250 attendees participated in our February Working Group Meeting or FHIR connectathon in Sydney, Australia, February 2-7, 2020 at the ICC Sydney Convention Center located at Darling Harbor. The WGM covered the usual activities such as work group meetings, tutorials and a FHIR Connectathon. The event also featured an evening dinner cruise with incredible sightseeing and photo taking of the Sydney Opera House from the ship. The Sydney WGM was produced by HL7 Australia under the leadership of their Chair, Jason Steen, who dedicated countless hours to plan and produce the WGM. HL7 is pleased to recognize Jason and his team for producing the Sydney WGM.

Virtual FHIR Connectathon in May

I am pleased to report that the three-day FHIR connectathon event was a smashing success. The 667 participants were provided hands on experience developing FHIR-based solutions and testing the exchange of data with one another. Kudos to Grahame Grieve, David Hay, Sandy Vance and our HL7 staff for producing the virtual event with general session presentations along with 35 tracks of discussions. We were thrilled to confirm that our HL7 FHIR connectathons are meaningful and successful whether held in person or virtually.

Virtual FHIR DevDays in June



Producing a first-ever virtual version of FHIR DevDays required our team to take a new approach and adapt the plans we had already made for a face-to-face format. This pivot required new platforms and execution of the best approach to deliver content and an experience that was as valuable as an in-person meeting and maintained the DevDays vibe. Kudos to our HL7 team for rising to the challenge and producing a well-received and successful event for 679 participants. Special thanks to Mary Ann Boyle for managing the HL7 staff on the numerous aspects of the event planning and coordination of speakers from around the world. Since many components of the meeting production approach were first time uses, we were thrilled that the event went smoothly and was well-received. We would also like to thank HL7 CTO Wayne Kubick as well as the Firely team, particularly Rien Wertheim and Marita Mantle-Kloosterboer, for their partnership in producing another successful event.

34th Annual Plenary Meeting

After record setting in-person attendance at our 2018 and 2019 Plenary and WGMs, the September 2020 event was also successful despite being produced virtually. The FHIR connectathon attracted 603 participants and the September Plenary and WGM attracted 443 participants. In addition, 35 work groups convened productive meetings.

The plenary meeting featured exceptional keynote presentations from:

- Bernardo Mariano, WHO Chief Information Officer and Director of Digital Health and Innovation
- Renato Sabbatini, PhD, FIAHSI, CEO, Edumed Institute, Co-Chair Education, HL7 Brazil, Sao Paulo, Brazil
- Amy Abernethy, MD, PhD, Principal Deputy Commissioner and Acting CIO, US Food & Drug Administration (FDA)
- Ken Goodman, PhD, Director, Institute for Bioethics and Health Policy, University of Miami
- Chesley Richards, MD, Deputy Director for Public Health Science and Surveillance, Centers for Disease Control & Prevention (CDC)
- Atul Butte, MD, PhD, Priscilla Chan and Mark Zuckerberg Distinguished Professor and Institute Director, University of California, San Francisco
- Jennifer Khoe, MD, General Surgeon, Southern California Permanente Medical Group—Kaiser Permanente

Online Class Report

The HL7 online program offered 23 paid online classes on HL7 FHIR, CDA and V2. Each webinar was also recorded live and posted to HL7 Education on Demand for fee-based or free viewing. In addition, HL7 provided training via seven online courses to four companies. Eight Member Advantaged webinars and five co-chair webinars also were offered. In addition, we offered 16 sponsored webinars. The number of registrants for all our webinars was approximately 15,000. The revenue from both online classes and virtual corporate training was \$198,000. The revenue from sponsored webinars was \$56,000.

Education on Demand

Education on Demand continues to provide a cloud-based, digital storehouse for HL7's educational archive and is accessible on any device with no applications required. Additional features include downloadable certificates of completion and a "My Activity" area that maintains an attendance record and certificates

earned for each user. During 2020, over 1,240 people accessed the courses from the portal, providing \$80,000 in revenue.

Remote/Distance Fundamentals Courses

HL7 International also offers web-based workshops (e-Learning) which includes guided exercises and projects that teaches by practice and examples. In 2020, HL7 offered three HL7 Fundamental courses, three FHIR Fundamental courses, two FHIR Intermediate courses and an HL7 FHIR Proficiency Exam review course. In addition, for the first time HL7 offered the FHIR Fundamentals training to three organizations. The HL7 Fundamentals and FHIR Fundamentals courses are produced by HL7 Argentina. In 2020, they were also offered by our affiliates in Austria, Brazil, Italy and Pakistan. The total revenue from all our eLearning courses was \$900,000 and which represents an increase of more than \$100,000 over our 2019 revenues. These courses served a total of 1,200 students.



EDUCATION ON DEMAND

Find the training you need, straight from the source! HL7 Education on Demand is your online source for HL7-related professional development and certification resources

- HL7's Fast Healthcare Interoperability Resources (FHIR®) standard
- Standards cited in federal legislation
- Skill building in HL7's most popular standards
- Health IT policy issues

➤ Check it out online at bit.ly/HL7EdOnDemand ◀



Online Certification Testing Program

With the launch of computer-based testing (CBT) in 2013, HL7 expanded opportunities world-wide to those seeking certification in CDA®, Version 2.7, Version 3 RIM and FHIR. Exam results, electronic certificates and electronic badges are available immediately. A certification directory is also available on the HL7 website.

A robust webpage centralizes information about certification specialties, training opportunities and resources for exam preparation, and provides a gateway to registration. HL7 partners with Kryterion, a leader in test development and delivery, to administer its certification exams at over 900 testing centers worldwide. Test-takers

may also opt for online proctored testing from their own computers anywhere in the world.

HL7’s certification program is offered online and at centers hosted by Kryterion all over the world. Many of the Kryterion centers were closed during the pandemic. Despite the pandemic, during 2020, 183 individuals registered for the exams, as compared to 232 in 2019, 228 in 2018, 215 during 2017 and 269 during 2016.

The table below reflects the number of individuals who became HL7 certified specialists during 2020. The worldwide number of certified HL7 specialists by exam is also noted.

Mark P. McQuay

Certification Across the HL7 Standards			
Certification Exam	# Registered in 2020	# Certified in 2020	Total # Certified
Clinical Document Architecture	6	4	790
FHIR	98	64	188
Version 2	78	44	3,929
Version 3 Reference Information Model (RIM)	1	0	381
Total	183	112	5,288

HL7 INTERNATIONAL COUNCIL REPORT

By the HL7 International Council Co-Chairs



The International Council (HL7 IC) provides a forum for the HL7 International Affiliates and other interested HL7 members to communicate and exchange views as well as discuss issues regarding the international development, adoption, application and implementation of HL7 interoperability standards. The International Council recommends to the Board of Directors actions and policies on behalf of the International Affiliates.

Leadership

The HL7 International has three co-chairs reflecting a range of locations around the globe.



Peter Jordan
HL7 New Zealand

Peter has been involved in national implementations of HL7 standards since the early 1990s. He has just commenced his third two-year term as the HL7 New Zealand Affiliate Chair and has developed an HL7 FHIR Terminology Server (Terminz) for local use.



Line Saele
HL7 Norway

Line has been involved with HL7 since 2009. She works as an Enterprise Architect at the Norwegian Institute of Public Health. She is also a member of the HL7 Europe Board of Directors and a co-chair of Patient Administration WG.



Ron Parker
HL7 Canada

Ron has been participating in HL7 since 1998 and has held the positions of co-chair for the Architecture Review Board (ARB) and FHIR Governance Board in the past. He is in his second term as HL7 Canada Affiliate Chair.

The co-chairs coordinate closely with the international representatives to the HL7 Board of Directors, this includes our IC Co-Chair Peter Jordan and Diego Kaminker of Argentina.

International Council Activities

International Affiliate participation in meetings has been strong with 21 affiliate council members attending the February 2020 in-person meeting in Sydney, Australia. We had 40 registered attendees for the council meetings themselves.

Of course, with the emergence of the COVID-19 pandemic, the International Council has shifted to virtual bi-monthly meetings and, despite the time zone challenges for participants, attendance has been strong. Virtual meetings in 2020 were held on May 25, September 16, and November 24. The meetings are all scheduled using Universal Time Coordinated (UTC) and we have been alternating meeting times (10:00 and 19:00 UTC) to help ensure international affiliate members are not consistently disadvantaged in terms of their local time.

Highlights

- Celebration of the 10-year anniversary of HL7 Europe regional community.

Regional members have been involved in a great deal of activity with the International Patient Summary collaboration and many initiatives promoting HL7 standards in the region.

- Creation of HL7 Latin America and Caribbean Region (HL7 LAC). This has been supported by the HL7 Board Chair, Dr. Walter Suarez, and receives strong support from Argentina and Chile.
- New and Returning HL7 Affiliate Members. There have been some new and reinstated HL7 Affiliate members over the course of the year, including Belgium, Pakistan, Saudi Arabia, and United Arab Emirates
- Participation in the HL7 Board Re-envisioning Task Groups. The HL7 IC has active representation in several of the task groups established as part of the HL7 Re-envisioning strategy. These include: Global Relevance – Affiliate Relationships, Internal Organizational Structure, and Community task groups.

Plans for 2021

During the IC engagement in the HL7 Re-envisioning Task Groups, the IC community is documenting and comparing our respective structures, roles, value proposition in our respective country's health sectors, and in our relationship with HL7 itself. Correspondingly, the IC members will be working to define

where HL7 International can better support the affiliates.

The International Council will continue to conduct virtual meetings for the foreseeable future, and even when in-person working group meetings resume, there will likely be virtual meetings scheduled between the WGM's.

Countries with HL7 Affiliates in 2020

Argentina	France	Poland
Australia	Germany	Portugal
Austria	Greece	Romania
Belgium	Hong Kong	Russia
Bosnia & Herzegovina	India	Saudi Arabia
Brazil	Italy	Singapore
Canada	Japan	Spain
Chile	Korea	Sweden
China	Netherlands	Switzerland
Croatia	New Zealand	Taiwan
Czech Republic	Norway	UAE
Denmark	Pakistan	UK
Finland	Philippines	Ukraine

FIND HL7 ON SOCIAL MEDIA



<https://www.linkedin.com/groups/2478980>



<http://twitter.com/HL7>



<http://www.facebook.com/HealthLevel7>

HL7 2020 STANDARDS SNAPSHOT



HL7 Standards Receiving ANSI Approval in 2020

HL7 Version 3 Standard: Laboratory;
Result, Release 1

Date Approved: 1/10/20

HL7 Cross-Paradigm Specification:
FHIRPath, Release 1

Date Approved: 1/16/2020

HL7 EHRS-FM Release 2:
Immunization Functional Profile,
Release 1

Date Approved: 3/17/2020

HL7 Version 3 Standard: Shared
Messages, Release 3

Date Approved: 4/27/2020

HL7 Version 3 Standard: Patient
Administration; Person Registry,
Release 1

Date Approved: 4/27/2020

HL7 Version 3 Standard: Implantable
Device Cardiac - Follow-up Device
Summary, Release 2

Date Approved: 4/27/2020

HL7 Cross Paradigm Implementation
Guide: UDI Pattern, Release 2

Date Approved: 6/24/2020

HL7 Electronic Health Record System
Functional Model, Release 2.1

Date Approved: 6/30/2020

HL7 Version 3 Standard: Regulated
Product Submission, Release 2

Date Approved: 7/27/2020

HL7 Version 3 Standard: Privacy and
Security Architecture Framework,
Release 1

Date Approved: 7/28/2020

HL7 Version 2.6 Implementation
Guide: Newborn Screening for Critical
Congenital Heart Defects (CCHD),
Release 1

Date Approved: 8/3/2020

HL7 Version 2 Specification:
Conformance, Release 1

Date Approved: 9/18/2020

HL7 Version 2.6 Implementation
Guide: Early Hearing Detection and
Intervention (EHDI), Release 1

Date Approved: 10/1/2020

HL7 EHR-System Electronic
Nutrition Care Process Record System
(ENCPRS) Functional Profile,
Release 2

Date Approved: 10/15/2020

HL7 CDA® R2 Implementation Guide:
Healthcare Associated Infection
Reports, Release 3 - US Realm

Date Approved: 12/1/2020

HL7 Cross-Paradigm Specification:
Clinical Quality Language, Release 1

Date Approved: 12/1/2020

HL7 Version 3 Standard: Refinement,
Constraint and Localization to Version
3 Messages, Release 2

Date Approved: 12/1/2020



HL7 Standards for Trial Use (STUs) Published in 2020

STU Publication of HL7 FHIR Profile: Occupational Data for Health (ODH), Release 1

STU Publication of HL7 CDA® R2 Implementation Guide: Consolidated CDA Templates for Clinical Notes; Occupational Data for Health Release 1—US Realm

STU Publication of HL7 FHIR® Implementation Guide: DaVinci Payer Data Exchange US Drug Formulary, Release 1—US Realm

STU Publication of the HL7 FHIR® Implementation Guide: Electronic Case Reporting (eCR)—US Realm

STU Publication of the HL7 CDA® R2 Implementation Guide: Public Health Case Report, Release 2—US Realm—the Electronic Initial Case Report (eICR)

STU Publication of HL7 CDA® R2 Implementation Guide: National Health Care Surveys (NHCS), R1 STU Release 3—US Realm

STU Publication of HL7 CDA® R2 Implementation Guide: Quality Reporting Document Architecture (QRDA I), Release 1, STU Release 5.2—US Realm

STU Publication of HL7 FHIR® Implementation Guide: Bidirectional Services eReferrals (BSeR), STU1, Release 1—US Realm

STU Publication of HL7 CDA® R2 Implementation Guide: Healthcare Associated Infection Reports, Release 3, STU 4—US Realm

STU Publication of HL7 CDA® R2 Implementation Guide: Orthodontic Attachment, Release 1—US Realm

STU Publication of HL7 FHIR Implementation Guide: mCODE Release 1—US Realm

STU Publication Request for HL7 FHIR® Profile: Quality, Release 1—US Realm (STU4)

STU publication of HL7 Version 2.6 Implementation Guide: Vital Records Birth and Fetal Death Reporting, Release 1 STU Release 2.1- US Realm

STU Publication of HL7 FHIR® Implementation Guide: International Patient Summary, Release 1

STU Publication of HL7 Version 2.6 Implementation Guide: Vital Records Death Reporting, Release 1 STU 2—US Realm

STU publication of HL7 FHIR® Implementation Guide: Quality Measures, Release 1 STU2 for FHIR R4—US Realm

STU publication of HL7 FHIR® Implementation Guide: Data Exchange for Quality Measures STU2 for FHIR R4—US Realm

STU publication of HL7 CDA® R2 Implementation Guide: Personal Advance Care Plan (PACP) Document, Release 1—US Realm STU Release 2

STU Publication of HL7 FHIR® Implementation Guide: Consumer-facing Real-time Pharmacy Benefit Check, Release 1—US Realm

STU Publication of HL7 FHIR® Implementation Guide: Clinical Research Sponsor Laboratory Semantics in FHIR, Release 1

STU Publication of HL7 FHIR®
Implementation Guide: FHIR
Shorthand, Release 1

STU Publication of HL7 FHIR®
Implementation Guide: Unsolicited
Notifications, Release 1—US Realm

STU Publication of HL7 FHIR®
Implementation Guide: C-CDA on
FHIR, Release 1, STU Release 1.1

STU Publication of HL7 FHIR®
Implementation Guide: Vital Records
Mortality and Morbidity Reporting,
Release 1—US Realm

STU Publication of HL7 CDA® R2
Implementation Guide: National
Healthcare Safety Network (NHSN)
Healthcare Associated Infection (HAI)
Reports for Long Term Care Facilities
(HAI-LTCF-CDA), Release 1, STU 1—
US Realm

STU Publication of HL7 Cross-
Paradigm Domain Analysis Model:
Vital Records, Release 4

Informative Documents Published in 2020

Informative Publication of HL7 Arden
Syntax: Implementation Guide, Release 3

Informative Publication of HL7 CIMI
Logical Model for Analysis: Analysis
Normal Form (ANF), Release 1

Informative Publication of HL7
Cross Paradigm Storyboard—Payer
Perspective, Value Based Care

Informative publication of HL7 Version
3 Domain Analysis Model: Composite
Security and Privacy, Release 1

Informative Publication of HL7
Informative Document: C-CDA
Scorecard Rubric, Release 1—US Realm

Informative publication of HL7
Guidance: Basic Provenance for C-CDA
and FHIR, Release 1—US Realm

Informative Publication of HL7 Cross-
Paradigm Implementation Guide:
Medical Device Data Sharing, Release 1

Informative publication of HL7
Electronic Health Records Dental Health
Functional Profile, Release 1—US Realm

Informative Publication of HL7 FHIR®
Guidance: Quality Reporting, Release
1—US Realm

Informative Publication of HL7
Version 3 Standard: Orders; Diet and
Nutrition, Release 1

Informative Publication of HL7
Version 3 Standard: Care Provision;
Food and Medication Preferences,
Release 1

Informative Publication of HL7
Domain Analysis Model: Intra-
Procedure Anesthesia, Release 1

Informative Publication of HL7
Domain Analysis Model: Common
Clinical Registry Framework, Release 2

Informative Publication of HL7
Version 3 Domain Analysis Model:
Generalized Anxiety Disorder, Release
1—US Realm

Informative Publication of HL7
Version 3 Domain Analysis Model:
Bipolar Disorder, Release 1—US Realm

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