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AWARD

DOLBY®

2020 GLOBAL AUDIO AND VISUAL CONFERENCING ENABLING TECHNOLOGY LEADERSHIP AWARD

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Background and Company Performance

Industry Challenges

The modern workforce and workplace is changing quite rapidly. Unprecedented growth in remote and flexible work, distributed teams, and globalization are leading to new technology expectations. There has been a massive user demand for better audio-video meetings and seamless content sharing that allow people to connect better, regardless of where and how they work.

As businesses globally respond to the unprecedented event of COVID-19, Frost & Sullivan notes that they face the challenge to properly empower their remote workforce with the best collaboration tools - so employees, whether working from their home office or company office locations, can experience the most natural and productive meeting experiences. Dolby's innovative video and audio technologies capture details as vividly as if everyone is in the same room, whether calling from a flex room, a board room, or a home office.

Despite the growing need for better meeting solutions, users have to often settle for "good enough" audio-video quality and less than optimal user experiences. Additionally, the shift to VoIP and greater use of mobile devices for meetings has resulted in significant changes in user experience. There is a strong need among distributed teams and remote workers to utilize better quality audio and video communications that enhances productivity, reduces meeting fatigue, and improves the speed of doing business.

According to Frost & Sullivan's most recent research, the total video conferencing market is on a high growth trajectory and is forecast to grow at a compound annual growth rate (CAGR) of 12.1 percent from 2018 to 2023 to reach $13.82 billion by 2023. The CAGR for seat license shipment is forecast to grow at a robust 21.5 percent with total installed base to reach 86.7 million seats in 2023, with rapid adoption coming from next-generation devices and intelligent cloud services that will establish video as a preferred mode of business communications. The main technology components of video meetings — robust audio, intuitive wireless content sharing, engaging video conferencing, and flexible whiteboarding — are obviously critical for today's agile work environments. In a recent Frost & Sullivan global survey of C-level decision makers, heavy users of video conferencing report that they have seen 6 times greater product innovation, 5 times improved customer experience, and 6 times accelerated decision making over light or moderate users of video conferencing.

Frost & Sullivan strongly believes that meeting rooms as well as cloud audio, video, and web conferencing services are increasingly pivotal in enterprise digital transformation. In a 2020 global Frost & Sullivan survey of 1,266 IT and telecom decision makers, 58 percent of respondents reported they had deployed video and web conferencing tools and another 28 percent indicated that they intend to invest in such tools in the next couple of years. In addition, 41 percent of decision makers with desktop video and web conferencing already deployed reported that they were making these services available to their entire workforce, whereas the remainder were deploying to employees selectively, either based on job role or location. Improving productivity was selected by one-third of the respondents as a key benefit of video and web conferencing tools, and ranked the highest among other key

benefits such as boosting product innovation, improving employee satisfaction, enhancing sales and marketing effectiveness, and improving the customer experience.

Given the upsurge in demand, Frost & Sullivan monitors how vendors are racing to capture growth opportunities in a crowded playing field. As a result, device and cloud vendors are expanding product portfolios to offer a broad spectrum of solutions. Despite the technology advancements, video meetings today remain costly to deploy organization wide and cumbersome to use. Huddle rooms, in particular, represent an under used and under penetrated asset in most organizations. Furthermore, meeting fatigue from being on too many video calls has been a growing user issue. Video meetings are harder than in-person meetings as they require users to process non-verbal cues like facial expressions, the tone and pitch of the voice, and body language; all while paying attention to the content and context of the meetings. This often results in user anxiety and fatigue. *Frost & Sullivan analysts conclude that there is a salient need today for natural meeting experiences, backed by easy audio, robust video and seamless content sharing features that do not drain users and help enhance user productivity and engagement*.

Dolby Laboratories has nicely realized the above challenges. The company has successfully extended its long heritage in developing world class audio and video technologies for the cinema, home entertainment, mobile and gaming experiences to create better quality audio video meetings for business users. Dolby leads with the notion that there is no reason for collaboration users to accept poor meeting experiences that hamper productivity. Frost & Sullivan recognizes how Dolby's long and established legacy in audio video expertise and a culture of innovation are overcoming the current market challenges and improving the user experience for meeting users.

Customer Impact and Business Impact

Visionary Innovation

Dolby Laboratories is based in San Francisco with offices in over 20 countries around the globe. Through innovative research and engineering, Dolby has transformed the science of sight and sound and has enthralled millions of people through its experiences—with Dolby Cinema, Dolby Vision, Dolby Atmos, Dolby Audio, and Dolby Voice—reshaping entertainment and communications at the cinema, on the go, in the home, and at work.

As a technology company, Dolby's DNA is deeply ingrained in providing industry leading, high quality communication experiences. Dolby Laboratories entered the enterprise communications and collaboration market in 2013 to address the challenges that users face with poor audio quality in business meetings. It launched Dolby Voice - an audio conferencing technology that offers superior spatial perception, voice clarity and background noise reduction to emulate the in-person meeting experience. Since then, Frost & Sullivan analysts observe how Dolby has successfully expanded its portfolio to offer a range of intelligent solutions for modern meetings.

Its comprehensive portfolio of innovative audio and video conferencing solutions includes:

- Dolby Voice Software - Dolby Voice is Dolby's audio technology that it licenses to leading video, web and audio conferencing service providers. Delivering crystal-

clear audio that reduces meeting fatigue and allows for easy, natural conversations, this innovative technology suppresses background noise, maintains consistent volume across soft and loud talkers, and makes the dialog easier to understand. Spatial audio presents each person's voice from a distinct location, just like being around the meeting room table, making it simpler to focus on the content of the conversation.

- Dolby Conference Phone – Dolby built the Dolby Conference Phone from the ground up to fully deliver the benefits of Dolby Voice technology. This is an advanced conference room phone that adapts to individual room design, including those with poor acoustics to deliver premium sound quality. It features a touch-screen interface that makes setting up and managing a conference call easy. By using multiple microphones and advanced software, the Dolby Conference Phone captures the entire sound atmosphere in the conference room. Remote participants hear the voices of people in the conference room as coming from distinctly different points in space.

- Dolby Voice Room– Launched in 2018, Dolby Voice Room marked Dolby's entry in the fast-growing video conferencing market and offers an affordable, simple to use, robust audio-visual device. Including a 4k camera, the Dolby Voice Hub, and the Dolby Conference Phone to enable high quality audio visual communications and content sharing, it offers an elegant and intuitive user experience. Its simplified setup and deployment through intelligent hardware design, minimal components, and automated deployment tools save IT the time to install and manage.

Dolby Voice Room has transformed the meeting room experience to level the playing field for remote participants in a meeting. It offers sophisticated signal processing that produces clear audio, while suppressing extraneous noises. In 2020, Dolby continued its passion for innovation with the introduction of Dolby Voice Huddle, a conferencing solution designed specifically to address the challenges of video meetings in smaller spaces. This compact solution features Dolby intelligent acoustic technology which calibrates based on the TV and room space to deliver optimum audio quality - without the need for additional speakers and sound bars. Dolby Voice Huddle joins the previously released Dolby Voice Room and Dolby Voice Room Pro (large room camera) solutions to complete the Rooms with Dolby Voice video conferencing product portfolio.

The key attributes of Dolby Voice Room include:

- Dynamic leveling to continuously map the room sound to distinguish between speakers and noise, canceling out common room distractions like HVAC or projector hum, and boosting the sound of quiet or distant participants so that everyone is heard.

- HDR (high dynamic range) video mapping that adjusts to different lighting situations to provide a high-quality representation of the room, overcoming muddled or washed-out images.

- Intelligent scene framing that adjusts the framing of the image to give everyone the most relevant view of the meeting automatically and electronically zooming in

or out and panning as needed to provide the best view of the meeting participants.

- Whiteboard view that provides clarity and visibility to remote participants — even when the whiteboard is adjacent to the camera, the remote participants will see the whiteboard as if they are standing directly in front of the whiteboard in the conference room.

- A unique, connected appliance powered by the Dolby Voice Hub serves as the management control center for each meeting space, allowing IT professionals to automate software and security updates centrally, eliminating the room-by-room updates required by competing PC or NUC-based solutions.

Market Expansion

In May 2020, Dolby Laboratories made a significant announcement. It launched Dolby.io, an API platform that extends the reach of its real-time AV technology to every piece of content and interaction. The initially available APIs analyze and enhance the quality of media content and enable multi-party audio and video communications to be embedded within an app. With Dolby.io, users can quickly clean up podcasts, webinars, or other audio with just a click of a button. Businesses, developers, and content creators can enhance every interaction and ensure users are seamlessly engaged, in-app, and in-flow throughout the experience.

At launch, Dolby has provided access to two API portfolio, one that will help with the analysis and enhancement of audio files, and another that enables developers to embed multi-party audio and video communications into applications. Dolby is planning on adding new APIs over time, to further extend the access to all of the company's technology. With Dolby.io, developers and businesses can now analyze and enhance all their media cost-effectively and at scale. These new and powerful media processing APIs can reduce background noise and improve dialog levels to increase intelligibility and engagement, in addition to providing quality metrics, audio analytics, and deeper content insights.

Dolby.io enables developers to bring Dolby experiences to new industries such as healthcare, distance learning, digital collaboration, online training, podcasting, and social media. Powerful cross-platform capabilities including spatial audio, advanced noise reduction, HD Video, broadcasting and screen-sharing can combine to make remote learning, telehealth visits, training sessions and other live events feel more natural regardless of the distance separating participants.

Strong Technology Partnerships and a Leading Brand

Dolby's unique go-to-market is built on a large ecosystem of technology partnerships. Dolby's maintains strategic partnerships with leading audio and video conferencing service providers who integrate its audio video solutions into industry leading offerings.

Dolby Voice Software has been licensed and integrated into many of Dolby's service provider partner's offerings. In addition, Dolby's broad portfolio of audio, video and content sharing devices natively integrate with industry leading cloud-based unified communications and video conferencing services. With Dolby's partners bringing together all the hardware, software and a natively integrated cloud service, in a tightly integrated,

turnkey solution, customers can easily deploy, use and manage collaboration solutions across home offices, huddle rooms, small, mid-sized and large meeting rooms.

Over the last several years, Dolby has systematically expanded its technology partnerships and is now integrated and sold by leading audio and video conferencing providers and OEM partners such as BlueJeans, LogMeIn, Intrado, AudioCodes, PGi, BT, and Highfive (among others). As of May, 2020, the following partners have announced their plans for broader support of Rooms with Dolby Voice solutions:

- LogMeIn – expected to expand their GoToRoom solution with Dolby Voice offering with both Dolby Voice Huddle and Dolby Voice Room Pro solutions by the end of Q2, 2020

- Amazon Chime – currently offers an integrated room experience on Dolby Voice Room and is expected to extend the offering to Dolby Voice Huddle by the end of Q2, 2020

- BlueJeans by Verizon – service featuring Dolby Voice Room and Dolby Voice Room Pro is already available in market and is expected to offer BlueJeans Rooms featuring Dolby Voice Huddle in Q4, 2020

- AudioCodes – expected to integrate the Dolby Voice Huddle into the AudioCodes RX Suite to deliver the RVX80 Video Collaboration Bar, with planned availability in Q3, 2020

Dolby's technology partners BlueJeans and LogMeIn offer comprehensive Rooms-as-a-Service (RaaS) with Dolby Voice Room kits. The RaaS offer includes a Dolby Voice Phone, Dolby Voice Camera, Dolby Voice Hub, and the monthly software subscription for Dolby's partner providers' enterprise-grade cloud meetings platform along with maintenance and support — all as a pre-packaged monthly payment in a single invoice. Dolby and its cloud service partners have eliminated any barriers to adoption with the powerful combination of a cloud license and flexible Dolby Voice Room hardware kits. Dolby's technology partners acknowledge that the Dolby integration gives their communication and collaboration services an edge and significant differentiation in a fiercely competitive market. The inclusion of the Dolby technology into audio-video conferencing instills confidence in business customers that they will have a high quality meeting experience, and also helps its technology partners sell their products.

The RaaS model disrupts the traditional purchasing model by providing IT decision makers with the benefits of predictable pricing, a simplified approval process, and the convenience of adding more rooms as needed — all from a single vendor, combining the power of immersive audio with intelligent video. Dolby's partnership with industry leading cloud services provides excellent value to customers.

Customer Acquisition

Dolby video conferencing solutions and Dolby Voice have seen tremendous customer momentum and adoption since inception. The company has grown quite rapidly. Its device shipments quadrupled in 2019 over the prior year. The RaaS offerings have been a key driver in accelerating sales momentum, as well as the continued expansion of service provider partners, specifically the addition of LogMeIn and the product portfolio expansion with the Dolby Voice Room Pro offering

Adoption of its solutions by several large enterprise accounts has fueled the trajectory, a trend that Dolby expects to accelerate in 2020.

Examples of successful deployments include:

- Illumina - A global leader in DNA sequencing and array-based technologies, Illumina is fueling advancements in life sciences, oncology, reproductive health, genetic disease, agriculture, microbiology, and other emerging segments. Their globally dispersed workforce of over 8,000 employees solves scientific problems through a culture of innovation. Illumina uses huddle-ready rooms with BlueJeans and Dolby and the BlueJeans platform for collaboration, all-hands events, and Voice. Illumina has outfitted over 200 meeting spaces with BlueJeans and Dolby Voice Room. The simplicity of BlueJeans Rooms with Dolby Voice was a key factor in driving up usage. Rather than connecting to multiple tools, employees use the one-touch join feature on the Dolby Conference Phone to start meetings easily. In addition, Illumina benefitted from the quick, out-of-the-box installation process for BlueJeans Rooms with Dolby Voice. The Dolby Voice Room enabled it to develop an all-in-one solution that it could deploy easily with all parts that are pre-packaged and integrate with each other. As a result, Illumina has seen tremendous increase in technology adoption rates and usage among its workforce.

- BTG - A global healthcare company focused on Interventional Medicine, BTG's medical technology helps physicians treat patients through minimally invasive procedures. While bogged down by fragmented users, interpersonal collaboration, and no single solution for everyone to rely on, BTG was looking for easy-to-use video, audio and web conferencing for everyone, anywhere, on any device. BlueJeans Meetings and BlueJeans Rooms with Dolby Voice have enabled BTG employees to have high quality audio video meetings with content sharing and robust meeting room systems with a one-touch-to-join experience. As a result, BTG has saved £30,000 annually by eliminating redundant tools, reducing staff turnover, and increasing project delivery. It has also experienced accelerated technology adoption. Fifty percent of all meetings company-wide use video conferencing, enabling a culture shift in helping people communicate better.

In addition to these customers, multiple other large, medium, and small sized organizations have adopted Dolby conferencing solutions as a key business enabler.

Conclusion

Dolby has properly realized there are several challenges hampering effective meetings today. With innovation in its DNA, Dolby has applied its expertise in sight and sound signal processing to provide the improvements in voice and video quality and clarity that make meetings more natural and productive. Frost & Sullivan analysts conclude that these attributes, among several others, underscore Dolby's differentiated ability to deliver superior quality without sacrificing ease of use.

Frost & Sullivan believes that Dolby Laboratories' focus on the core principles of innovation, quality, and simplicity is successfully disrupting the market. For these reasons, Frost & Sullivan is proud to present the 2020 Global Enabling Technology Leadership Award to Dolby Laboratories.

Significance of Enabling Technology Leadership

Ultimately, growth in any organization depends on customers purchasing from a company and then making the decision to return time and again. In a sense, then, everything is truly about the customer. Making customers happy is the cornerstone of any successful, long-term growth strategy. To achieve these goals through enabling technology leadership, an organization must be best in class in three key areas: understanding demand, nurturing the brand, and differentiating from the competition.

- Acquire competitors' customers
- Increase renewal rates
- Increase upsell rates
- Build a reputation for value
- Increase market penetration

- Earn customer loyalty
- Foster strong corporate identity
- Improve brand recall
- Inspire customers
- Build a reputation for creativity

DEMAND

BRAND

Enabling
Technology
Leadership

COMPETITIVE
POSITIONING

- Stake out a unique market position
- Promise superior value to customers
- Implement strategy successfully
- Deliver on the promised value proposition
- Balance price and value

Understanding Enabling Technology Leadership

Product quality (driven by innovative technology) is the foundation of delivering customer value. When complemented by an equally rigorous focus on the customer, companies can begin to differentiate themselves from the competition. From awareness, to consideration, to purchase, to follow-up support, organizations that demonstrate best practices deliver a unique and enjoyable experience that gives customers confidence in the company, its products, and its integrity.

Key Benchmarking Criteria

For the Global Enabling Technology Leadership Award, Frost & Sullivan analysts independently evaluated Technology Leverage and Customer Impact according to the criteria identified below.

Technology Leverage

Criterion 1: Commitment to Innovation

Requirement: Conscious, ongoing adoption of emerging technologies that enable new product development and enhance product performance.

Criterion 2: Commitment to Creativity

Requirement: Technology leveraged to push the limits of form and function in the pursuit of white space innovation.

Criterion 3: Stage Gate Efficiency

Requirement: Adoption of technology to enhance the stage gate process for launching new products and solutions.

Criterion 4: Commercialization Success

Requirement: A proven track record of taking new technologies to market with a high rate of success.

Criterion 5: Application Diversity

Requirement: The development and/or integration of technologies that serve multiple applications and can be embraced in multiple environments.

Customer Impact

Criterion 1: Price/Performance Value

Requirement: Products or services offer the best value for the price, compared to similar offerings in the market.

Criterion 2: Customer Purchase Experience

Requirement: Customers feel they are buying the optimal solution that addresses both their unique needs and their unique constraints.

Criterion 3: Customer Ownership Experience

Requirement: Customers are proud to own the company's product or service and have a positive experience throughout the life of the product or service.

Criterion 4: Customer Service Experience

Requirement: Customer service is accessible, fast, stress-free, and of high quality.

Criterion 5: Brand Equity

Requirement: Customers have a positive view of the brand and exhibit high brand loyalty.

Best Practices Recognition: 10 Steps to Researching, Identifying, and Recognizing Best Practices

Frost & Sullivan analysts follow a 10-step process to evaluate Award candidates and assess their fit with select best practices criteria. The reputation and integrity of the Awards are based on close adherence to this process.

STEP		OBJECTIVE	KEY ACTIVITIES	OUTPUT
1	**Monitor, target, and screen**	Identify Dolby Laboratories candidates from around the world	• Conduct in-depth industry research • Identify emerging industries • Scan multiple regions	Pipeline of candidates that potentially meet all best practices criteria
2	**Perform 360-degree research**	Perform comprehensive, 360-degree research on all candidates in the pipeline	• Interview thought leaders and industry practitioners • Assess candidates' fit with best practices criteria • Rank all candidates	Matrix positioning of all candidates' performance relative to one another
3	**Invite thought leadership in best practices**	Perform in-depth examination of all candidates	• Confirm best practices criteria • Examine eligibility of all candidates • Identify any information gaps	Detailed profiles of all ranked candidates
4	**Initiate research director review**	Conduct an unbiased evaluation of all candidate profiles	• Brainstorm ranking options • Invite multiple perspectives on candidates' performance • Update candidate profiles	Final prioritization of all eligible candidates and companion best practices positioning paper
5	**Assemble panel of industry experts**	Present findings to an expert panel of industry thought leaders	• Share findings • Strengthen cases for candidate eligibility • Prioritize candidates	Refined list of prioritized Award candidates
6	**Conduct global industry review**	Build consensus on Award candidates' eligibility	• Hold global team meeting to review all candidates • Pressure-test fit with criteria • Confirm inclusion of all eligible candidates	Final list of eligible Award candidates, representing success stories worldwide
7	**Perform quality check**	Develop official Award consideration materials	• Perform final performance benchmarking activities • Write nominations • Perform quality review	High-quality, accurate, and creative presentation of nominees' successes
8	**Reconnect with panel of industry experts**	Finalize the selection of the best practices Dolby Laboratories	• Review analysis with panel • Build consensus • Select recipient	Decision on which company performs best against all best practices criteria
9	**Communicate recognition**	Inform Dolby Laboratories of recognition	• Announce Award to the CEO • Inspire the organization for continued success • Celebrate the recipient's performance	Announcement of Award and plan for how recipient can use the Award to enhance the brand
10	**Take strategic action**	Upon licensing, company is able to share Award news with stakeholders and customers	• Coordinate media outreach • Design a marketing plan • Assess Award's role in strategic planning	Widespread awareness of recipient's Award status among investors, media personnel, and employees

The Intersection between 360-Degree Research and Best Practices Awards

Research Methodology

Frost & Sullivan's 360-degree research methodology represents the analytical rigor of the research process. It offers a 360-degree view of industry challenges, trends, and issues by integrating all 7 of Frost & Sullivan's research methodologies. Too often companies make important growth decisions based on a narrow understanding of their environment, resulting in errors of both omission and commission. Successful growth strategies are founded on a thorough understanding of market, technical, economic, financial, customer, best practices, and demographic analyses. The integration of these research disciplines into the 360-degree research methodology provides an evaluation platform for benchmarking

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industry participants and for identifying those performing at best-in-class levels.

About Frost & Sullivan

Frost & Sullivan, the Growth Partnership Company, helps clients accelerate growth and achieve best-in-class positions in growth, innovation, and leadership. The company's Growth Partnership Service provides the CEO and the CEO's growth team with disciplined research and best practices models to drive the generation, evaluation and implementation of powerful growth strategies. Frost & Sullivan leverages nearly 60 years of experience in partnering with Global 1000 companies, emerging businesses, and the investment community from 45 offices on 6 continents. To join Frost & Sullivan's Growth Partnership, visit http://www.frost.com.