Visual 1st Virtual Conference

This year's Visual 1st conference was the first virtual one and included a pre- and post-conference video networking page, real-time chat during the conference, and post-conference get-together roundtables**.** With two 4-hour sessions on successive days and a short lunch break, 230 attendees (59% from North America, 35% from Europe and 6% from the rest of the world, the latter attending in the very early morning local time) were treated to numerous presentations.

Leading off the first Show and Tell session (4 minutes each) was *Simon Tavernier*, CEO of Stampix (https://stampix.com) opened the first Show & Tell session reviewing his app which lets you print your photos for free with an advertisement on the back. Initially, the app is only active in Belgium, but plans to expand to other countries.

Snapbar (www.thesnapbar.com), located in Austin, TX, rents photobooths with staffing and printing starting at $1,099 and creates unique virtual onsite photobooths for events, said CEO *Sam Eitzen*. The company had handled 400-500 world events during the previous 4-5 months. The big events are parties and Halloween. Snapbar received the Special Recognition Award for having to pivot with revenues going to zero overnight due to COVID-19 to its ability to find an unmet need and focus the team to quickly deliver something entirely new.

Jennifer van Veen from IP Labs (www.iplabs.de), a member of the Fujifilm Group, provides a white label e-commerce solution for photo service and web-to-print businesses. An advanced photobook can be created in under 2 minutes, including photo selection with suggested pictures, review of similar photos, and book creation. A sticker can also be added.

Viesus (www.viesus.com) was presented by *Servi Pieters* using a video that showed all the automatic and unattended image correction steps: AI object detection; contrast correction; brightness correction; sharpness correction; color correction, noise reduction; red-eye removal; and resampling (to minimize artefacts such as aliasing or pixels,) while also leveraging its AI-fueled understanding of the image content. For instance, areas in a photo identified as sky, skin, or vegetation can be corrected selectively if needed –rather than applying corrections to the entire image. It can also enhance photos in PDF format. Images that do not need enhancing are left unaltered.. One area of expansion beyond print could be to develop systems that upload large quantities of photos to e-commerce sites that could benefit from tailored image enhancements performed at scale and at great speed..

Sam Bogdash from axle.ai (https://axle.ai) mentioned the Speech module of his AI platform which is capable of rapidly creating a searchable transcript of any video or audio in your library. The service is priced at under $2 per hour of footage. axle ai 2020 is the latest edition of axle's award-winning media management software,

To obtain your personal subscription please call us at +1-239-398-0440 or visit our Website: http//photo-news.com

supporting anything from small media libraries to large collections of over one million assets.

Dotphoton (https://dotphoton.com) took the Best Technology Award for its lossless raw image compression explained *Eugenia Balysheva* One of the judges noted that,"When a company founded by two quantum physicists and a professional photographer join forces to build an imaging company, we have to take note. Dotphoton is using deep insights into the quantum processes occurring at the image sensor level to create a lossless compression technology achieving compression ratio's only seen with lossy methods. With Apple now enhancing support for RAW, the volume and size of images continuing to grow fast, and AI/ML image processing use cases becoming more mission critical in B2B, we believe there's a bright future ahead for the company."

Paris-based *Matthieu Rouif* from PhotoRoom (https://photoroom.com) has a free app on mobile devices that erases the original background of a photo and suggests hundreds of replacements. However, it includes a PhotoRoom watermark. The subscription PhotoRoom Pro removes the PhotoRoom watermark, offers an option to use the three extra Pro Cutout options (Standard, Person, Object) if you're not satisfied with the regular cutout, access to all pro backdrop library including the pro templates; and provides a higher resolution export.

Mok Oh from Mercari (www.mercari.com) presented **Managing Commerce-Focused User-Generated Photos at scale**. Mercari is a peer-to-peer marketplace app which differs from the likes of eBay and Craigslist by being photo-first, mobile-first, and community-first. It makes extensive use of AI, including such features as real-time pricing guidance and fraud protection, to enable merchants and consumers to easily sell their products and buyers to easily find the products they're looking for. Mercari does all of this at scale, supporting 350,000+ new items added every day, along with their corresponding photos.

When photos are the crucial ingredient that helps users to sell their product in a community-focused shopping app, the app developer needs to walk a fine line between facilitating automatic enhancement of photos to more accurately display the items for sale (e.g. photos shouldn't be out of focus or too low res) versus providing tools that make the photos look better. In fact, Mercari found that photos that looked too professional perform worse than those that look more user-generated and authentic.

Mok stated his company could become a marketplace for digital goods (such as for gaming), same-day delivery of physical goods, or providing APIs to embeded "sell your own products" buttons in vertical communities, such as sports affinity or music sites/apps.

The second round of short Show & Tell opened with *Philippe Brodeur* from Overcast HQ providing Video-Content-as-a-Service (VCaaS); microservices that are cloud-native, including digital asset organization. Enterprises are making a lot of content now, and anyone who's got a website is really a publisher these days. The pandemic has created different workflows for remote working: Provide transcoding services for people working with remote video over very low bandwidth in order to be able to speed things up.

Ercon Erciyes discussed how Monument (getmonument.com) is launching its new Monument 2, an ai cloud device that helps you to store and organize your photos automatically so you can find and browse your photos by camera type, people, places, and scenery, on Kickstarter, You can create and share encrypted photos and albums with your family in a secure, private way.

Deep Render (https://deeprender.ai) was reviewed by *Chri Besenbruch*. The company develops media compression algorithms intended to combine the fields of artificial intelligence, statistics, and information theory. It is fast and 80% smaller than AVI and CVV, reducing image size by 10x while maintaining the same level of visual quality. It raised £1.6 million, led by Pentech with participation from Speedinvest, to fund further development of its revolutionary image compression technology.

Michal Czaicki explained that Print Box (getprintbox.com) makes Smart Photobooks: Consumer uploads as many photos as they want and selects the number of pages and the number of prints/page. Printbox photo recognition and algorithms create time clusters, analyze photos, rate them, and select the best photos to create

a complete story. A preview is automatically created in 90 seconds. The customer gets well-separated pages which are visually coherent (max. 240 photos) and a choice of formats.

Capsule (https://capsule.video) was introduced by *Champ Bennet* earlier this year to your community into a content team to make videos. Only a webcam or phone are needed. Start up a capsule in minutes, create your own narrative using prompts (questions to get people talking), choose from hundreds of templates with music and video. It has been used by Samsung, Netflix and even the Chicago Bulls.

Tim Edmonds explained the PixxiBook (https://pixxibook.com) enables you to print the book of your blog, basically printed blogbooks. The Medium Portrait Hardcover Book is 21x30cm (8x11.5 inches), containing both photos and text. The streamlined and automated creation process will have your book created in 10 minutes and then it is printed and mailed. Prices consist of a base cost plus a per-page cost up to a maximum of 300 pages, with a 100-page book costing $58. Flat rate worldwide shipping is $7, although orders greater than $120 are shipped free.

The Photo Raw mobile app from ON1 (www.on1.com) is a professional photo organizer, raw processor, layered editor, and effects app, said *Dan Harlacher*. You can capture, edit, organize, and sync your photos across all of your devices and computers. Photos are AI auto adjusted. Besides RAW, it supports PEG, TIF, PSD, PSB, PNG, and DNG, as well as more than 800 cameras.

Photo Print Product Success Stories – Today's Rising Stars featured three companies:

Roger Bloxberg, Planet Art (www.planetart.com), a profitable 10 year customized photo product public company with 500+ people and annual revenues of $400 Million, serving 12 markets. It achieved 75% CAGR over ten years. Websites include Simply to Impress, Personal Creations, Photo Affections, Gifts.com, Canvas World, My Custom Case and recent addition Cafe Press. Mobile apps include Postagram, Ink Cards, and under the "Free Prints" mobile apps are prints (4x6"), photobooks, photo tiles, and gifts - the offers are simple and the money is made on shipping (a limit of 40 prints in Europe). 90% of all transactions are through the apps. There is no AI in use yet.

Liam Houghton, Popsa (https://popsa.com), a 4-year old start-up in London with 50 people with 2020 revenues of $25 million (goal to double that revenue). It has a mobile and desktop app for creating photo-books in and average of 12 minutes with the ability to add subtitles to front covers, write entire pages of text or insert captions at the bottom of each page. Other products include calendars, framed prints, ornaments, and photo tiles; and they bring in ideas from other industries. It delivers to 50 counties and the app is available in 12 languages. Popsa entered the US market less than a year ago, and this is its fastest growing market.

Cody Bratt, Google Photos Print Store (www.google.com), launched photobooks in 2017 to US, Canada and Europe, and added (US only) retail prints and canvas in 2019. The Google Photos Print Store leverages the fact that a user's photos are typically already backed up to Google Photos. Therefore with just a few taps they can turn a digital memory into a printed product. Cody commented that, as there is a fulfillment explosion, the goal is to make things simpler.

To Be Continued

IMI Europe Inkjet Academy (Part 2)

Continuing our review of the IMI Europe Inkjet Academy (https://imieurope.com) by *Simon Kew*, Piezo inkjet systems have a more controlled drop production than thermal inkjet systems and there is more freedom for ink development. Although there is a higher printhead manufacturing cost than thermal with a lower nozzle density, making it difficult to incorporate into low-end products, a long head life is important for high duty cycles.

INKS. Aqueous inks dominate the markets with porous substrates, e.g. desktop printing, mailing & addressing, commercial printing, textile printing; also have a large share of other markets, e.g. wide format - being extended

by latex formulations for non-porous substrates. Glycols are added to reduce drying in nozzles. Inter-color bleed on substrates needs controlling. Need to balance between control of drop spread and drying speed.

Two-Part inks use a clear fixer or treatment liquid to react with colored inks. Fast dry inks provide rapid penetration and spread. Ink fixer technologies, such as the Fujifilm DCLS Double-Component Liquid System have a treatment liquid, colorless with agglomerating agent, so the pigment is immobilized and precipitated close to the surface.

Latex inks are aqueous dispersed polymers. The ink vehicle softens the surface for good film adhesion (surface treatments for other media), Print zone heater evaporates water from ink vehicle - limits drop spread to prevent bleed and coalescence. A curing zone heater evaporates co-solvents, the latex particles coalesce, pigment is encapsulated, and the print is dry, durable and odor-free.

Solvent inks are traditionally used for non-porous substrates, e.g. wide format on vinyl, rigid sheets, plastic, metals, glass, etc. Mainly for piezo and continuous ink jet systems. Provides good adhesion and print quality. Requires a balance between nozzle open time and drying speed. Solvents used include: MEK, alcohols, glycols, lactates - often requires extraction systems. Eco-solvents is a generic term for milder solvents with less odor - image can take hours to lose the odor. There are shipping and storage issues for volatile/inflammable materials.

Oil-based inks are used with piezo printheads (volatile components cannot be used with thermal heads) for some non-porous applications: coding & marking, high speed printing (Riso), ceramic tiles. The materials consist of long-chain glycols and hydrocarbons, vegetable oils. It is fast drying as drops are absorbed very quickly into the substrate. Coatings are often used to improve print quality by controlling drop spread and penetration.

UV-Curable inks provide high image quality and durable images on non-porous substrates. There are two options: *Free Radical* - high-speed cure, shrinking problems. Curing stops when exposure to UV light ends; oxygen inhibits cure, so nitrogen purging is used; can be diluted with water/solvent for Thermal Inkjet. Cationic - slower cure, good adhesion with no shrinkage; curing continues post-curing. Expensive materials from limited sources and safety issues in use and printed material.

Phase-change inks were developed in the early 1980s as a way of overcoming limitations of aqueous inks. Ink is jetted from a heated printhead around 100-110°C as a liquid, returns to solid at room temperature on the substrate: this restricts spread and absorption of the drop into substrate; almost entirely eliminates color bleed; and is fast drying, so high-speed printing is possible. Drawbacks: inks are based on waxes, etc. which remain thermally active; to achieve a good spread and reduce ink thickness, substrate needs to be heated. Curable gel-based inks under development may solve this problem.

A general comparison of dye-based vs. pigment inks is shown in Figure 1. Pigments tend to be more lightfast and more waterfast (because of the need for resins to bind to the substrate), but are not as vibrant as dyes due to particle size. Pigments are much smaller than nozzles.

Issues are: maintaining

Figure 1 - Dye-Based vs. Pigment Inks

Dyes	Pigments
Soluble organic colorant	**Insoluble colorant**
Generally not waterfast	Generally waterfast
Easier ink formulation	Requires dispersion
Monomolecular chromophore	**Groups of chromophores**
Brighter colours	Light scattering = decreased transparency
	More chromophores = UV stability
Every molecule contributes to colour	**Only surface molecules interact with light**
High colour saturation	Lower theoretical colour gamut
Potential for high fade with UV exposure	
Penetrate porous media	**Remain near media surface**
Bond to coating components	Less feathering
Smoother gray-scale	Improved OD & contrast
Decreased OD	

Source: Simon Kew

dispersion; achieving stable drop break off; nozzle maintenance; and drying speed vs. robustness. White inks are required for transparent substrates (mainly TiO_2, must be circulated to remain in suspension.

Specials:

Metallics - effect pigments are required for labels,packaging, etc. to complete with conventional print. Traditional metallic pigments are too big for inkjet. Solvent and UV-Cure systems now available.

Ceramic tiles - traditional fireable pigments are dense and difficult to disperse in low viscosity inkjet inks. Circulating flow has been a big enabler for this application.

MICR - US and other countries still use cheques for payment, requiring magnetic characters. Requires fine ferrite particles in a stable suspension.

To Be Continued

A Look at the UK Photography Industry

Revealed: The Face Of Photography Industry Today And Tomorrow is a report prepared by Currys PC World and Canon. Key findings suggest that:

- The global photographic services market is expected to decline from $36.9 billion in 2019 to $36.1 billion in 2020, but the market is then expected to recover and reach $41 billion in 2023

- As of 2020, there are 83,000 photographers and audio-visual & broadcasting equipment operators in the UK, up from 71,000 in 2019

- 96% of photographers saw a decrease in bookings over the past year'

- The global photographic services market is expected to decline from $36.9 billion in 2019 to $36.1 billion in 2020

- Four professional photographers gave their expert insight into the future of their industry. Wedding photography duo Glenn and Lauren say, "The biggest changes moving forward are probably going to be photographers diversifying their income."

- Nearly a fifth of photographers are considering a change of career due to their loss of income in 2020

- The average salary for a UK photographer is £42,212 a year

- Wedding photographers charge the highest day-rate, averaging £600 for a day's work

- The most hashtagged type of photography on Instagram is #travelphotography (133.5m), followed by #foodphotography (65.5m) and #portraitphotography (47.6m)

- The sectors hit the hardest by a loss of income are newborn baby, family and wedding photography

- A photography degree can cost £27,000+, however, there are other courses available such as a diploma (approx. £350) or professional diploma (approx. £450)

- Many photographers go down the self-taught route

Based on Google Trends data, January is the most popular month that people search for a wedding photographer, suggesting this could be a good time for those in the industry to focus on marketing their services.

Food photographer, Robin Goodlad says, "Instagram is a great way of getting specifically targeted images to the right audiences." Food photography is the second most hashtagged type of photography on Instagram (after travel), making the platform an effective marketing tool for photographers in the food industry.

https://photo-news.com/?p=1005

Brief News of the Photofinishing Industry

• According to a recent report from the ITU (International Telecommunication Union), entitled *Connecting Humanity: Assessing investment needs of connecting humanity to the Internet by 2030*, in 2019, **globally about 3 billion people (aged ≥10) were still unconnected**, and over 12% of the unconnected population lives in remote, rural locations where traditional networks are not easily accessible.

A disproportionate number of the unconnected are women, particularly in Africa and South Asia, where the digital gender divide is particularly marked. Globally only 48% of women use the Internet, compared to 58% of men. In developing regions like sub-Saharan Africa, the mobile Internet gender gap is as high as 37% and in South Asia it is 51%.

The report said that around 85% of the global population is already covered by global broadband networks, and around 70% of the global unconnected are within a 4G coverage area. However, in sub-Saharan Africa, around 80% of those covered by a 4G network are not connected because of lack of affordable access, limited relevant content and the skills to benefit from Internet access. (http://ow.ly/tdwm30rlMWK)

• **3D (Time of Flight) Sensors integrated into smartphones will enable better low light photography** by accurately measuring depth in the short and longer range at the lowest power consumption, says *Philipp von Schierstaedt*, VP at Infineon Technologies. (http://ow.ly/r2GN30rlSlc)

• **Kölnmesse announced it is suspending implementation of photokina at the location in Cologne** for the time being. This decision is primarily due to the continuing steep decline in the markets for imaging products and the increasingly heterogeneous needs of the different market segments. (http://ow.ly/i5eb30rlYKe)

Commenting on this decision, *Hans Hartman* from Visual 1st wrote an interesting analysis of this decision: **Timing is everything: what photokina could have learned from CES**. (http://ow.ly/QXdr30ro0Vf)

• **In Germany**, the Federal Council approved the new photo requirements for identity cards and passports. Starting May 2025, **only digital passport photos will be allowed for inclusion on ID cards and passports**. Photo retailers and studios will be able to continue taking these photos. (http://ow.ly/GB1Z30rlZvI)

• Kosmofoto writes that **ORWO Filmotec is reportedly considering a return to color film production**. Filmotec recently merged with InovisCoat, a company that had been spun out of the break-up of Agfa in the 2000s. The YouTube channel Nico's Photo News has speculated that this new operation may already be making color negative films for at least one customer. Lomography Chrome Purple film and the recent Lomography Metropolis film – which are both C-41 films – are produced in Germany. Lomography's CN range of 100, 400 and 800-ISO color negative films are made in the USA by Eastman Kodak. (http://ow.ly/kyjb30rm0bI)

• German film producer **Adox has released a new two-part development kit that can turn any black-and-white film into monochrome slides**. The Adox Scala Reversal Kit has only two parts, plus an optional clear bath stage. It will work on any currently available black-and-white films, though it is optimized for high-silver-content films such as Adox Scala 160 and CMS 20 II. (http://ow.ly/M2e730rm0gv)

• **Four big lessons we've learned from the past decade of digital transformation** are reviewed in a CMS Wire article. Desktop automation not digital transformation; Business users play a significant role; Data analysis Is key; AI has created new possibilities. (http://ow.ly/WHJ330rmgFw)

• In Germany, the new **BRANDS UNIQUE by allcop program enables personalization of products for a quantity of one** and brand providers can have individual products personalized. It acts as an interface for connecting the brand supplier to the production and shipping routes. A total package includes software, product storage, customization, and shipping to customer. SOGGLE is a multifunctional glasses cloth that protects goggles from scratches during shipping and also serves as a glasses cleaner. With SOGGLE INDIVIDUAL consumers can create a unique SOGGLE with their own photos, designs and text. (http://ow.ly/O4fU30rmgLm)

• **The silver price has risen strongly in 2020**, achieving an intra-year gain (through November 13) of 38%, as the COVID-19 pandemic led to a surge in safe haven demand. A Silver Institute review covers key components of the silver market which were affected, and shows the decline in silver usage for photography (film and paper). (http://ow.ly/gX6K30rmhgi)

• **Primera Technology rolled out its Eddie NSF and GMP-certified edible ink printer** for printing onto cookies and other food items. The machine prints a dozen 3.5-inch (89-mm) cookies or other items in two minutes, rotated into position by a carousel feeder. (http://ow.ly/2DLC30rmCly)

• **The 2021 edition of drupa has been cancelled**. The next event will take place as scheduled from May 28 – June 7, 2024 in Düsseldorf, Germany. A four-day digital virtual drupa event has been planned from April 20 – 23, 2021. (http://ow.ly/hcjQ30rmWoA)

• **Ilford Imaging Europe announced the retro Sprite 35-II, an affordable re-usable 35mm compact film camera** with a fixed shutter speed (1/120s) with a 31mm single element f9 fixed-focus wide-angle lens and built-in flash. It will be available in January 2021 (http://ow.ly/zo9e30rnaGL)

• The critical role Web-To-Print and cloud-based software will play under the "**New Normal: "How to Grow your Print Business in the Post-Covid World** discusses making you more visible online, providing greater insight into your business, and automating to reduce costs. (http://ow.ly/TDtT30rnb3O)

• **Think Forward 2021: The Social Reset**, an ebooklet from We Are Social, reviews events over the past year that are shaping the way we use social. It suggests six considerations, with details, that will influence social in 2021. (http://ow.ly/KR9t30rnfQO)

• **The 2020 State of the Industry Report** from *Signs of the Times* surveyed the unmistakable impact of COVID-19 on the sign industry and concludes the sign industry is resilient. An increasing number of print shops companies are offering signage services. (http://ow.ly/OrSW30rnlx0)

• **Another major photo show, CP+ in Japan, will now be online only**. Originally planned as a hybrid in-person and online, as the soaring numbers of COVID infections continue, the organizers have decided to eliminate the physical show in Yokohama. (http://ow.ly/h23830rnO4P)

• In agreement with its partners in associations and the industry, and with the trade fair advisory committee, **Messe Düsseldorf has cancelled both interpack and components 2021**. It will focus on interpack 2023 scheduled for May 2023. (http://ow.ly/864C30rnOhh)

• Todd Dominey has published an 11-minute video on his Youtube channel that dives into the **interesting history of the Kodak Aerochrome infrared film**. Learn why the infrared film was developed by Kodak and what the US military had to do with its inception. (http://ow.ly/7Okq30ro4kc)

• **ooh!LeisureWorld (oohhh!Freizeitwelten) at Messe Hamburg**, originally scheduled for March 24-28, 2021 **has been postponed until February 9-12, 2020**. Under this umbrella, there are six related tradeshows, among which is Fotohaven Hamburg. (www.oohh-freizeitwelten.de)

• **PetaPixel reveals a Wikipedia Photo Copyright scam** in which scammers are apparently changing the copyright ownership data on Wikipedia photographs in order to trick people who use the photos legally into paying for free usage with proper credit. (http://ow.ly/la1c30rpd1f)

• **Developing B&W film with beer?** A great great video, "How to Develop Film With Beer," proves that, not only can it be done, it can produce a quality negative. A stout produces a softer negative, whereas a sour, much lower pH, produces a sharper negative. (http://ow.ly/aG0C30rpDVI)

• New to Japan, **Studio Luminous "allows you to shoot gorgeous and dramatic wedding photos in Korean style**." In addition, it offers couples a choice of three fixed price packages that include photo shoot, dress, any necessary retouching and an album. (https://photo-news.com/?p=1009)

Upcoming Conventions/Meetings

Date	Organizer	Event	Location
Dec. 3-6	FESPA **NOW Dec. 2-5, 2021**	FESPA Eurasia	**Istanbul Expo Centre**
+44 1737 240788	Fax: +44 1737 233734	(www.fespa.com)	**Istanbul, Turkey**
Dec. 6	ASBL **NOW Oct. 22-24, 2021**	Brussels Photofair	**Brussels Expo**
+32 (0)475 46 14 48		(www.brussels.be/fair-photo-days)	**Brussels, Belgium**
Dec. 7-9	Smithers Pira	Digital Print for Packaging Europe 2020	**Leonardo Royal Hotel**
+44 1372 802019	**VIRTUAL ONLINE**	(www.printfutures.com/europe)	**Amsterdam, Netherlands**
Dec. 8	Abacus Communications	Kiosk and Digital Signage 2020	**Business Design Centre**
+44 (0) 1732 897 452	**POSTPONED**	(https://kdseurope.com)	**London, UK**
Dec. 13	Dipro bvba	Photography Fair	**Antwerp Expo**
+32 (0)3 239 56 38	**POSTPONED**	(http://www.dipro.be/benl/fotografiebeurs)	**Antwerp, Belgium**
Jan.11-14, 2021	CEA **VIRTUAL**	International CES 2021	**ALL DIGITAL**
+1-301-694-5243		(www.CES.tech)	
Jan. 11-15	IS&T **VIRTUAL**	Electronic Imaging 2021	**Short Courses**
+1-703-642-9090	Fax: +1-703-642-9094	(www.electronicimaging.org)	
Jan. 18-23	IS&T **VIRTUAL**	Electronic Imaging 2021	**Technical Sessions**
+1-703-642-9090	Fax: +1-703-642-9094	(www.electronicimaging.org)	
Jan. 17-19	PPA **ONLINE**	ImagingUSA 2021	**ONLINE**
+1-888-260-0016	Fax: +1-404-614-6405	(www.imagingusa.org)	
Jan. 20	IMI	Inkjet Age of Materials Conference	**ONLINE Session 2**
+1-207-235-2225	Fax: +1-207-235-2226	(http://imiconf.com)	
Jan. 25-31	EFI **ONLINE**	EFI Engage Conference	**ONLINE**
		(http://ow.ly/azSE30rgNK9)	
Jan. 25-Feb. 5	IMI Europe **ONLINE**	Inkjet Winter Workshop	**ONLINE**
+44 1223 236920		(https://imieurope.com)	
Jan. 27-30	SPAC **VIRTUAL**	School & Sports Photogs of California	**ONLINE**
+1-510-390-3044		(www.spac-usa.org)	
Feb. 7-9	NACDS	2021 Regional Chain Conference	**Marriott Harbor Beach Resort**
+1-703-549-3001		(http://regional.nacds.org)	**Ft. Lauderdale, FL**
Feb. 17	IMI	Ink Jet 2021 Conference	**ONLINE**
+1-207-235-2225	Fax: +1-207-235-2226	(http://imiconf.com)	**Bimonthly until December 2021**
Feb. 22-25	Photo Booth Expo **NEW DATE** Photo BoothExpo 2021		**Southpoint Casino**
+1-888-260-0016	Fax: +1-404-614-6405	(https://photoboothexpo.com)	**Las Vegas, NV Feb 21-24,2022**
Feb. 23-25	GSMA	MWC Connected Impact	**Shanghai New Int'l Expo Ctr.**
		(www.mwcshanghai.com/)	**Shanghai, China**
Feb. 24-25	IMI Europe	InnoLAE	**ONLINE**
+44 1223 236920		(https://imieurope.com)	
Feb. 25-28	CIPA **VIRTUAL**	CP+ Camera & Photo Imaging 2021	**ONLINE**
+81-3-6741-4015		(www.cpplus.jp/en/)	
Feb. 25-Mar. 3	Messe Düsseldorf **CANCELLED** Interpack 2021		**Düsseldorf Fairgrounds**
	Now May, 2023	(www.interpack.com)	**Düsseldorf, Germany**
Mar. 5-8	SYNC **Real & Virtual**	SYNC 2021	**Sandestin Golf & Beach Resort**
+1-800-320-8115		(www.syncrocks.com)	**Destin, FL**
Mar. 9-12	FESPA **NOW October 12-15**	FESPA Global Print 2021	**RAI Expo Center**
+44 1737 240788	Fax: +44 1737 233734	(www.fespa.com)	**Amsterdam, Netherlands**
Mar. 9-12	FESPA	European Sign Expo 2021	**RAI Expo Center**
+44 1737 240788	Fax: +44 1737 233734	(www.fespa.com)	**Amsterdam, Netherlands**
Mar. 17	IMI	Inkjet Age of Materials Conference	**ONLINE Session 3**
+1-207-235-2225	Fax: +1-207-235-2226	(http://imiconf.com)	
Mar. 17-20	SWPP	Societies of Photographers 2021	**Novotel London West**
+44-1745-356935		(https://thesocieties.net/convention/)	**Hammersmith, London UK**
Mar. 18-21	SPE	Imaging Legacy: Archives, Collections	**Sheraton Denver Downtown**
+1-216-622-2733	Fax: +1-216-622-2712	(www.spenational.org/conferences/2021)	**Denver, CO**
Mar. 24-27	FESPA	FESPA Brasil	**Expo Center Norte**
+44 1737 240788	Fax: +44 1737 233734	(www.fespa.com)	**Säo Paulo, Brasil**
Mar. 30-Apr. 1	ASI	ASI Show Orlando	**Orange County Convention Center**
+1-800-546-3300		(www.asishow.com)	**Orlando, FL**

Business News

<u>Citizen Watch Co., Ltd., Tokyo, Japan</u> (https://www.citizen.co.jp) ...

…the Electronic Producs business manufactures high-resolution digital photo printers, which play important roles in retail stores, factories and society in general.

Citizen reported FY (Mar. 31, 2020) **net revenues of ¥278.5 Billion** (2019 - ¥321.7 Billion) with **a gross profit of ¥10.1 Billion** (2019 - ¥123.6 Billion) with **an income from operations of ¥6.1 Billion** (2019 - ¥22.4 Billion), **loss before income taxes of ¥15.1 Billion** (2019 - income of ¥19.3 Billion) and a **net loss of ¥17.5 Billion** (2019 - income of ¥13.8 Billion), or **-¥53.07/share** (2019 - +¥42.0/share). **Comprehensive loss was ¥26.5 Billion** (2019 - income of ¥11.5 Billion) [attributable to owners -¥25.7 Billion (2019 - +¥11.0 Billion), attributable to non-controlling interests -¥0.7 Billion (2019 - +¥0.5 Billion)].

For 6 months (Sept. 30, 2020) **net revenues of ¥89.0 Billion** (2019 - ¥144.4 Billion) with **a gross profit of ¥26.4 Billion** (2019 - ¥54.4 Billion) with **a loss from operations of ¥8.3 Billion** (2019 - income of ¥5.7 Billion), **loss before income taxes of ¥10.3 Billion** (2019 - income of ¥5.2 Billion) and a **net loss of ¥21.8 Billion** (2019 - income of ¥3.7 Billion), or **-¥68.81/share** (2019 - +¥11.39/share).

Electronics and Other Products [Digital photo printers; Line thermal printers; Calculators; Electronic thermometers; Electronic blood pressure monitor]. FY sales were ¥22.4 Billion (2019 - ¥25.2 Billion) with an operating loss of ¥0.2 Billion (2019 - profit of ¥0.6 Billion). Half-year sales were: ¥8.8 Billion (2019 - ¥11.4 Billion) with an operating loss of ¥0.2 Billion (2019 - income of ¥0.1 Billion).

In Electronic Products FY overall revenues from information equipment fell, reflecting sluggish sales of the mainstay photo printers and POS printers largely due to a fall in appetite for capital expenditure, despite encouraging sales of bar code printers. Revenues from healthcare equipment declined due to strong sales in the Middle East and Asia being more than offset by a drop in sales in Japan.

In Other Products, revenues from jewelry products decreased, chiefly due to a reactionary fall following the consumption tax hike and increasingly sluggish sales in department and specialty stores, particularly in regional markets, despite signs of rises in sales of luxury products, as well as the reduction of sales activities in consideration of company liquidation and the transfer of some businesses.

For the first six months, among information equipment, demand for capital expenditure that includes barcode printers as well as photo printers and POS printers, which are the Group's mainstay products, continued to be weak despite signs of recovery beginning to appear as economic activities have resumed. Consequently, revenues in the overall information equipment sector decreased. Revenues from healthcare products increased mainly due to significant growth in demand for thermometers in the domestic market. In addition, sales declined due to the Group's withdrawal from the jewelry product business.

Watches [Watches; Movements; System clocks.] FY sales were ¥141.6 Billion (2019 - ¥163.5 Billion) with an operating profit of ¥3.9 Billion (2019 - ¥12.4 Billion). Half-year sales were: ¥38.1 Billion (2019 - ¥72.4 Billion) with an operating loss of ¥5.4 Billion (2019 - income of ¥3.4 Billion).

For six months 2020, in the domestic market, sales of CITIZEN brand watches decreased significantly as the Group faced severe challenges with the sharp fall in demand for inbound tourism and consumption due to voluntary restrictions on travel despite signs of recovery observed in some areas. In overseas markets, sales in the European market was relatively stable thanks to recovery that began after business resumption. However, sales declined in the North American market as the market remained weak and sales particularly at physical stores were sluggish and consumption was limited due to growing uncertainties. In the Asian market, sales decreased as the overall market continued to struggle despite steady progress made toward recovery in China. In the multiple brand segment, sales of BULOVA brand watches fell significantly in the main North American market among other markets despite signs of a recovery, and

sales of other brands also decreased. Sales of movements declined sharply, reflecting a worldwide fall in consumption despite signs of recovery observed in the sales of analog quartz movements and steady sales of mechanical movements particularly in the Chinese market.

Machine Tools [Cincom, sliding headstock type CNC automatic lathe; Miyano, fixed headstock type CNC automatic lathe; MC20, multi-station machining cell; alkapply solution, solution service utilizing IoT] FY sales were ¥58.5 Billion (2019 - ¥72.2 Billion) with an operating profit of ¥7.3 Billion (2019 - ¥13.1 Billion). Half-year sales were: ¥20.7 Billion (2019 - ¥30.9 Billion) with an operating income of ¥0.6 Billion (2019 - ¥4.6 Billion) For half-year 2020, in the domestic market, revenues decreased due to the significant contraction of demand for capital expenditures in the overall economy despite a sense of bottoming out observed in the automobile industry and other industries. In overseas markets, sales to IT and other industries in the China remained strong and orders received in Europe and the Americas began to grow gradually. However, this was insufficient to offset a year-on-year decrease and resulted in a fall in revenues...

Devices and Components [Automotive components; Compact switches; Chip LEDs; LEDs for lighting; Crystal devices; Ferroelectric LCDs] FY sales were ¥55.9 Billion (2019 - ¥60.81 Billion) with an operating income of ¥0.9 Billion (2019 - ¥2.5 Billion). Half-year sales were: ¥21.3 Billion (2019 - ¥9.4 Billion) with an operating loss of ¥1.1 Billion (2019 - income of ¥0.8 Billion).

For six months 2020, While sales of auto parts as part of precision machining components remained low due to a fall in new car sales, sales to the Europe and American markets began to recover in the second quarter, which helped reduce the amount of fall. Sales of switches declined due to sluggish sales of those for smartphones. In opto-devices, sales of LED chips decreased due to a fall in demand in the European and American markets as well as in the Chinese market and sluggish sales of LED for automobiles reflecting the weak market, amid the continued severe price competition in LED for lighting products. In other products, demand for quartz devices for communication devices increased, while overall sales of other products decreased, reflecting a fall in demand associated with the impact of the COVID-19 pandemic.

HiTi Digital. Inc. Taipei City, Taiwan (www.hiti.com) ...

... is a manufacturer and supplier of digital dye-sublimation photo products and services

...reported FY (Dec. 31, 2019) **net revenues of NT$985.8 Billion** (2018 - NT$1,225.8 Billion) with **a gross profit of NT$45.8 Billion** (2018 - NT$184.9 Billion) with **a loss from operations of NT$452.9 Billion** (2018 - loss of NT$326.5 Billion), **loss before income taxes of NT$395.8 Billion** (2018 - loss of NT$417.4 Billion) and a **net loss of NT$409.4 Billion** (2018 - loss of NT$422.2 Billion), or -**¥NT$1.85/share** (2018 - -NT$1.60/share). **Comprehensive loss was NT$391.7 Billion** (2018 - loss of NT$411.0 Billion) [attributable to owners -NT$313.8 Billion (2018 - -¥287.2 Billion), attributable to non-controlling interests -NT$77.9 Billion (2018 - -NT$135.0 Billion)].

For 9 months (Sept. 30, 2020) **net revenues of NT$111.2 Billion** (2019 - NT$282.7 Billion) with **a gross loss of NT$19.6 Billion** (2019 - income of NT$45.1 Billion) with **a loss from operations of 110.3 Billion** (2019 - loss of NT$61.9 Billion), **loss before income taxes of NT$97.4 Billion** (2019 - income of NT$12.8 Billion) and a **net loss of NT$119.2 Billion** (2019 - income of NT$3.3 Billion), or -**NT$0.44/share** (2019 - +NT$0.09/share). **Comprehensive loss was NT$3114.8 Billion** (2019 - income of NT$1.1 Billion) [attributable to owners -NT$79.8 Billion (2019 - +NT$13.6 Billion), attributable to non-controlling interests -NT$39.4 Billion (2019 - -NT$12.5 Billion)].

The company's website claims that HiTi's dye-sub photo printers are in use by more than 100,000 studios and 2 million industry professional photographers worldwide.

Unfortunately, because the Chinese annual report contained images of commentary rather than text that could be translated, although we contacted the company we are unable to provide additional information

Hewlett-Packard Inc., Palo Alto, CA (www.hp.com) ...

... reported FY2020 (31 Oct., 2020) **net revenues of $56,639 million** (2019 - $58,756 million), with **a gross profit of 10,437 million** (2019 - $11,170 million), **earnings from continuing operations of $3,462 million** (2019 - $3,877 million), **income before taxes of $3,231 million** (2019 - $2,523 million) and a **net income of $2,844 million** (2019 - $3,152 million), or **$2.00/share** (2019 - $2.07/share).

COVID-19, and the volatile regional and global economic conditions stemming from the pandemic, could materially adversely impact HP's business. It also faces an increased risk of litigation and governmental and regulatory scrutiny as a result of the effects of COVID-19 on economic and market conditions. Further, COVID-19 may also affect our business and financial results in ways that are not presently known to us or that we do not currently consider as significant risks to our operations.

HP experienced temporary factory closures and other supply chain disruptions as a result of COVID-19, and it may continue to experience such disruptions. For example, its manufacturing sites, including in China and Southeast Asia, as well as those of its suppliers and outsourcing partners, were adversely impacted by COVID-19 as a result of quarantines, facility closures, and travel and logistics restrictions. As of the end of fiscal year 2020, HP's factories have returned to largely normalized levels.

Personal Systems total revenue was $38,997 Million (2019 - $37,661 million), with an income before taxes of $2,312 million (2019 - $1,898 million). HP faces challenges with industry component availability and a competitive pricing environment.

By business unit, revenue was: Notebooks $25,766 million (2019 - $22,928 million); Desktops $9,806 million (2019 - $12,046 million); Workstations $1,816 million (2019 - $2,389 million); and Other $1,609 million (2019 - $1,331 million). The net revenue increase was primarily due to growth in Notebooks, Desktops and Workstations, partially offset by unfavorable foreign currency impacts. The net revenue increase was driven by a 2.2% increase in unit volume and 0.5% increase in average selling prices as compared to the prior-year period. The increase in unit volume was primarily due to growth in Notebooks and Desktops.

The net revenue increase was primarily due to growth in Notebooks, partially offset by Desktops and Workstations, and unfavorable foreign currency impacts. The increase in unit volume was primarily due to growth in Notebooks resulting from strong demand driven by work from home, distance learning and gaming, partially offset by Desktops and Workstations. The decrease in ASPs (Average Selling Price) was primarily due to mix shifts to consumer and education, and unfavorable foreign currency impacts.

Printing net revenue was $17,641 million (2019 - $20,066 million) with earnings before taxes of $2,495 million (2019 - $3,202 million). By business unit, revenue was: Supplies $11,586 million (2019 - $12,921 million); Commercial Hardware $3,539 million (2019 - $4,612 million); and Consumer Hardware $2,516 million (2019 - $2,5336 million). A competitive pricing environment, including from non-original supplies (which includes imitation, refill or remanufactured alternatives), and a weakened market in certain geographies with associated pricing sensitivity of HP's customers present challenges. HP also obtains many Printing components from single sources due to technology, availability, price, quality or other considerations. For instance, it sources the majority of its A4 and a portion of its A3 portfolio of laser printer engines and laser toner cartridges from Canon. Any decision by either party to not renew our agreement with Canon or to limit or reduce the scope of the agreement could adversely affect our net revenue from LaserJet products; however, HP has a long-standing business relationship with Canon and anticipates renewal of this agreement.

The decline in net revenue was primarily driven by a decline in Supplies, Commercial Hardware and unfavorable foreign currency impacts. Net revenue for Supplies decreased due to demand weakness as businesses operated with reduced onsite capacity and a majority of office workers continue to work from home. ASPs and printer unit volume decreased as compared to the prior-year. Printer ASPs decreased primarily due to mix shifts and unfavorable foreign currency impact. The decrease in printer unit volume was driven by unit decreases in both Commercial and Consumer Hardware.

Net revenue for Commercial Hardware decreased due to a 19.4% decrease in printer volume and a 19.6% decrease in ASPs. The printer unit volume decline was due to lower demand as businesses operated with reduced

onsite capacity due to COVID-19. The decrease in ASPs was driven by mix shifts, competitive pricing and unfavorable foreign currency impacts.

Net revenue for Consumer Hardware decreased due to a decrease in printer unit volume by 2.7% partially offset by 2.0% increase in ASPs. The printer unit volume decrease was driven by supply chain disruptions due to COVID-19. The increase in ASPs was primarily due to disciplined pricing, partially offset by mix shifts and unfavorable foreign currency impacts.

Smartphoto Group, Wetteren, Belgium (www.smartphotogroup.com)...

... reported half-year 2020 (June 30) **consolidated** operating revenue of €**21,167,000** (2019 - €18,986,000)**,** a **profit before taxes of** €**1,089,000** (2019 - €1,146,000), an **EBITDA** (earnings before interest, taxes, depreciation, and amortization) of €**2,699,000** (2019 - €2,534,000), a financial loss of €234,000 (2019 - loss of €75,000), **a profit from continuing operations adjusted for non-cash items of** €**2,586,000** (2019- €2,463,000), an **income from continuing activities of** €**863,000** (2019 - €1,105,000), and a **net profit of** €**219,000** (2019 - €280,000). Net cash dropped to -€1,197,000 in 2020 (2019 - +€1,698,000).

Smartphoto's focus on mobile, both in terms of websites and product development, and the further improvement of the entire flow on the sites, drove growth compared to last year. An additional pillar that was launched in the first half of the year for a large number of products is super-fast delivery: "Order Today, Delivered Tomorrow." All these efforts resulted in a double digit increase in the number of customers.

In the first 6 months of 2020, smartphoto further expanded its product range. For example, the personalized wine box with a bottle of wine of your choice was added to the range. Customizable products such as the shopper, the lunch box, the drinking bottle and the wooden tea box were also launched. The extensive product range of smartphoto "not only makes our customers feel good, but also contributes to their social connection with family and friends, also from a distance."

The EBITDA grew in the first half of 2020 (+6.5%), but less growth than the revenue due to the temporary shift in product mix as an effect of the measures around COVID-19. In this uncertain period, but with the known seasonality, smartphoto also achieved a positive net profit in the first half of this year.

For the first 6 months of 2020 internally generated immaterial assets were mainly the expenditures for its in-house developers to program the editing module within the HTML5 standard so that as much as possible the editing module is created for an immense audience, to implement the migration of the web site and adapt the process to adapt the project and adapt it to the new platform.

The personnel costs over the first 6 months of 2020 were 7.0% higher compared to the first 6 months of 2019 The total number of employees - expressed in full-time equivalents - has evolved from 206 per 30 June 2019 to 220 at 30 June 2020.

The investments mainly relate to investments in its mobile applications such as the User Experience (UX) project, the further conversion of the editing module of its website to the HTML5 standard, the further migration of the website to the cloud and adaptations of the website platform to implement new designs.

An amount of €245,000 of these investments was internally generated. These internally generated intangible assets mainly concern the expenditures for its in-house development to program the HTML5 standards editing module and to create as complete a module as possible for the widest possible audience, to realize the migration of the website to the cloud, to implement the modifications of the website platform, and to work out the process within the UX project.