Towards virtual reality conferences?

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COVID-19 is forcing us to reconsider every aspect of life. The authors ask what future ophthalmic meetings could look like.

The coronavirus disease COVID-19 pandemic disrupted ophthalmic conferences resulting in the cancellation of the majority of meetings in 2020, e.g. RCOphth Annual Congress, ARVO, ASCRS, EVER and so on. The WOC, ESCRS, EURETINA and EuCornea have gone virtual altogether. During this pause, we reflect on the purpose and meaning of ophthalmic conferences, examine the pros and cons of virtual conferences and webinars, and discuss what we could do to make virtual conferences more social and exciting.

Conventional conferences

Many of us already miss ophthalmology congresses and recall pleasant memories of such events. Both national and international ophthalmology societies hold ophthalmology congresses. These conferences mostly focus on clinical ophthalmology, and few are research-oriented. Some are devoted to specific subspecialties of ophthalmology. On the other hand, some are related to general ophthalmology or include all subspecialties. New conferences do their utmost to compete with well-established and prestigious ones. The dates and venues of important meetings are published years in advance so ophthalmologists can plan well ahead of time.

Speakers gain tremendously at scientific conferences by sharing their experience and knowledge. They improve their reputation by appearing at meetings and having their names on related news and online sources. Moreover, speakers can also enhance their research and presentations from audience feedback. International collaborations and invitations for upcoming conferences happen as a result of these events. Delegates can learn and brush up their knowledge. Some aspects of this knowledge earned at congresses cannot be achieved simply by studying published literature. Attendees could also catch up with friends and make new friends. They can enjoy a new culture, visit beautiful places and taste local cuisine. Opening and award ceremonies,
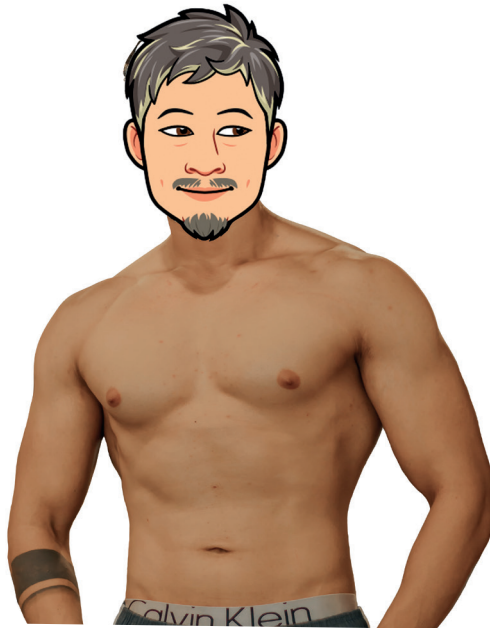

Figure 1: Bitmoji can combine with any physique!

charity events and cultural shows were exciting parts of any conference.

Commercial companies present and promote their new products. Conferences are the right place for a meeting of companies' regional or national representatives and consultants. They are a great opportunity for companies to run their training and business meetings. Delegates can visit exhibitor stands for seeing new devices and even asking for special offers to buy them. With well-attended meetings, organisers can raise funds for learned societies and colleges, in addition to enhancing their reputation.

Drawbacks of conventional conferences

The human mind has an outstanding ability to forget bad experiences and memories. Attending ophthalmology congresses can be costly, considering registration fees, flights, accommodation, sustenance, entertaining and other expenses, although to many these are tax-deductible. It may not be affordable, especially for young ophthalmologists or ophthalmologists from developing countries. Ophthalmologists from some countries may face difficulties with visa entries. Ophthalmologists have to take days off work, not seeing patients and doing operations, reducing throughput and income. Jet lag cannot be ignored with international flights.

Proliferation of webinars

We have got used to the shortcomings of conventional conferences for a long time. However, COVID-19 has dramatically changed all aspects of our life, including ophthalmology scientific gatherings. There was no significant lag following the cancellation of these conferences before the start of virtual meetings and proliferation of webinars. We receive marketing emails and social media notifications on multiple webinars every week. They are diverse, both national and international, and cover various topics. With cancelled routine clinical and surgical activities, we can enjoy staying at home, munching our snacks whilst laying on the sofa and listening to speakers. However, we are bound to get bored with over exposure to these competing webinars, which are mostly not organised by a national or international society.

International collaborations and invitations for upcoming webinars happen during webinars, breeding more webinars. They cover overlapping topics and usually run at evenings and weekends. It is essential to control the growth of webinars which are not organised by experienced teams or knowledgeable speakers. Some of them also have technical issues. Companies drive some of these webinars, and the quality of scientific content cannot be monitored as in a real conference. There is no system to review and score these webinars, so they mostly do not have CPD points.

Towards virtual reality conferences

How can we replicate the qualities of face to face conferences and make them even better, at least in some respects, with virtual conferences? Properly organised and hosted, virtual conferences could simulate and emulate some aspects of real

Figure 2: Delegates could don virtual reality gear.

through a 360° camera, similar to that of a camera on a Google Maps car, but instead placed on the tour guide. Virtual reality headsets will provide a panoramic visual and auditory experience.

Delegates may also bump into one another in the corridors and exchange e-business cards; set up a virtual meeting in cafés, open-air, and restaurants, and even take selfies and other photographs together. These are real social moments in a virtual environment. There should be an option of local hotels to host local delegates in different cities and countries. Meals can be served, or instead, pre-paid meal vouchers can be distributed. Food and beverage served could be gastronomic and be included in the conference fees. Events can be streamed live or recorded, allowing online delegates to participate locally and share the joy.

Commercial and technical aspects of virtual meetings

Virtual meetings should have their commercial attractions for companies (Figure 3). Companies can have trade stand presentations (Figure 4). Exhibitors should get a list of the delegates, and it should be possible for attendees to get an appointment to talk with a company's members. Trade materials including catalogue, marketing materials and freebies can be delivered as PDF or by post. There should be a chance for online shopping to directly order goods during the conferences, preferably with special conference prices for delegates who have paid to attend.

Investments should be made on high-speed internet connections, especially in developing countries, and building robust gaming software that can support our need for productive virtual meetings. A real-time technician (or team for large conferences, one per auditorium) is necessary, especially for big or international conferences. Regulations for the protection of copyrights

meetings, giving a sense of occasion. The marketing hype, the scale of virtual events and registration fees should not be inferior to conventional conferences. The wish to attend and to meet friends and experts, albeit virtually, should be strong. Virtual conference centres could be modelled like video games. Attendees should be able to walk through conference halls as avatars, visiting different rooms and recognising others by their faces, and from their name badges. Although the faces of avatars need to be recognisable, delegates can alter their appearance somewhat or may choose to appear as bitmojis. They can also adopt a different physique and wear different attire as their alter egoes (Figure 1)!

There should be an option for creating online groups to meet before, during and after the conference, to allow further conversation and side talks. There should be chat rooms for meeting, socialising and sharing thoughts with friends and other attendees. Rooms can be public for all the delegates or specific for the invited delegates with a 'do not disturb'

sign. In the registration form, attendees may state their areas of interest. Then potential attendees can be invited to join optional small group meetings according to their interests. Additionally, they would also be allowed to join public rooms and auditoria without invitation. Different methods of conversation can be used, attendees could text each other, they could also use audio notes, or they can even communicate real time by phone or video. Voice and video communication is more social but will necessarily be more time-consuming compared with non-synchronous communication. With more funding and experienced coders, we could even extend this concept into a virtual reality application, envisaged through a headset and controllers (Figure 2). Here, the options are limitless and would not be restricted to delegates but could also include spouses and families who would typically join the extracurricular or social activities that a conference entails. For example, this would allow for local guided tours of cities, where delegates could experience a live tour

Figure 3: A virtual trade stand.
Figure 3 and 4 provided by TS Kumaresh
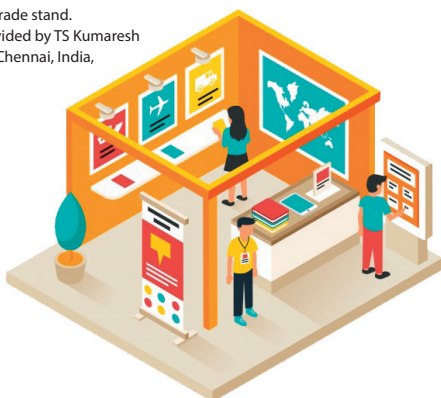VP Sales, Hexafair, Chennai, India,
www.hexafair.com

Figure 4: Virtual lecture at trade stand.

and novel ideas need to be devised for virtual meetings. There should be a clear set of rules for participants with clarification of the actions that will be taken when regulations are violated. Strong software should be created to guard against hijacking and cyber-attacks.

Scale of organisation

A well-organised, rich program with diverse topics and knowledgeable speakers is essential to attract delegates. Delegates will also be encouraged to attend if there is an excellent platform for exhibition and para-conference activities and entertainment. The scale of organisation could be improved by emerging specialist companies for planning and organising virtual conferences. Profit can vary according to the degree of success of the event.

Virtual conferences require planning and behind the scenes real-time logistics, just as conventional conferences. They should be run by a set of organising committees, including scientific, logistic and finance committees. The conference program could be very similar to a real conference, with multiple sessions running in parallel. There should be restrictions to control the presence of delegates, ensuring that a delegate cannot be present in more than one place at one time. Delegates should ideally adopt and live in the time zone of the conference in order to attend and interact during live sessions. Speakers may be asked to provide a simple and short quiz to be used as an assessment tool of the delegate's attentiveness during the session. Approved CPD points could be issued according to the time spent in every activity, and /

or according to the delegate's response to the quizzes.

Conclusion

Technology is changing rapidly. In the future, conferences could be run in forms of real, virtual or hybrid. The current situation, due to COVID-19, may accelerate the shift towards virtual and hybrid conferences. Experience forced upon us by the pandemic can provide an estimate of the effectiveness of these conferences, and can also help us to find the best ways to overcome all the obstacles in organising and running virtual and hybrid conferences.

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