

QUALITY

STANDARDIZATION AND CERTIFICATION OF PALS

BASED ON A LECTURE GIVEN AT MAFO – THE CONFERENCE
IN MILAN, FEBRUARY 28TH, 2014

This presentation focuses on the marketing of individualized and personalized progressive lenses. I will try to provide one or two inputs and will also give some personal opinions. If I give a personal opinion, I will make that quite clear.

By Mark Mackenzie

We will look at the messages put out by the major manufacturers:

- | How easy are they to understand?
- | Can you or I understand them?
- | Can a normal consumer understand them?
- | What are the measurements that manufacturers take?
- | Are there differences in the measurements taken?
- | Is it possible to create a universal system?
- | Is it possible to standardize?

The following information has been taken from our Strategy with Vision trade show reports. I

have taken some extracts. What I tried to focus on are the differences between manufacturers presenting their products to the consumer. Every manufacturer needs sphere, cylinder, PD, fitting heights, pantoscopic angle, and bow of the frame.

I am trying to see – like on a tree – what are the differences of the leaves? Are they big, small, what is their structure?

OVERVIEW

Let's have a look at Essilor. Essilor focus on the importance of the dominant eye and the distance from the rotational center of the eye. By allowing the dominant eye to recognize an

image faster, the reaction time of the wearer is accelerated. They also have the Eyecode, which you all are familiar with, which is basically the distance from the rotational center of the eye to the inside of the lens.

BBGR focus on left and right handed wearers. People look on a piece of paper differently, whether they are right or left hand readers. The Intuitive design is based on two new technologies:

- | Ergonomic technology: specific positions of left and right-handed wearers are taken into account in the design.
- | Vision booster: it combines a new calculation technology and a new double surface technology.

Carl Zeiss Vision is focusing on digital devices. Their focus is: We are living in a world of digital devices and they are looking into what issues people have with these devices. Fatigue is one of them, dry eye, neck strain and headaches as well. Hoya Vision Care focuses on different prescriptions for the right and left eye. They carried out detailed research and have come to the conclusion, based on their database, that 80% of all German and Austrian presbyopes need a different prescription for the right and left eye. This leads to a visual imbalance. The results for the consumer can be tiredness, a stinging sensation in the eye and / or headaches. Rodenstock focuses on pupil optimized correction and correcting for astigmatism in the near distance. They say: If I look in the distance, then my pupils are wide open and if I look the near, my pupils have a small aperture. By making a subjective refraction of the near vision of the consumer, Rodenstock can improve the width of vision in the near and intermediate distance. This is called Personal EyeModel. Seiko focuses on individualization. This may sound rather banal but is quite interesting. They claim that the needs of the Central European markets are to a certain extent different to the needs of the Japanese market. If Seiko only get their products from Japan, there are certain parameters, which they cannot get. They believe that for individualization three parameters are needed: Distance from the cornea to the inside of the lens, the bow of the frame and the pantoscopic angle. Because those are the elements that are needed in Central European markets, they transferred the production of those products to their production unit in Germany.

MESSAGES OF THE MANUFACTURERS

I just covered the larger manufacturers. But what do you need for a prescription? This is banal: you need a prescription for distance, the near add, the monocular centration distances and the fitting heights. But for individualized and personalized lenses you need the pantoscopic tilt, the back vertex distance, the face form angle or wrap angle in the "as worn" position and the frame specifications.

We tried to look at the messages of the manufacturers relating to measurement. How do you measure? There are a lot of different

machines to do the measurements. What are the differences?

If we look at Essilor's Visioffice – what is different? The dominant eye and the position of the optical eye rotation center are measured. For a more simple solution you have a pad based solution. It is called M'eye Fit Touch. It is also a very nice system for measuring the reading distance.

Next is BBGR Eystation. It will do all the measurements of which we were talking about. The clip-on-unit on the frame allows a measurement of the reading distance to be made. BBGR believe that whether you are right or left handed is extremely important in the design of progressives.

Carl Zeiss Vision has had for many years highly technical and developed products. The iTerminal 2: the red cross on the screen of the i.Terminal 2 replicates seeing into infinity. As such the wearer can stand quite close to the unit when making distance vision measurements. They would say this is one of their differences in their system compared to the competition. The i.ProfilerPlus is a very powerful auto refractor, which also measures higher order aberrations and carries out corneal topography. The measurement of higher order aberrations allows CZV to develop the iScription optimization for the lens.

We now are going on to Hoya Vision Care. They have two pieces of equipment. Very often major companies tend to have two pieces of equipment. Either they have a big free standing device or a device which is placed on table or the iPad device, depending probably on the shop and shop location. The visuReal system will measure the monocular pupil distance and fitting heights, the distance between the cornea and the inside surface of the lens, the pantoscopic angle, the bow of the frame and calculates automatically the boxed frame measurements, the OMA shape and the required diameter. The HVC Viewer Sensor can be plugged into the earphone connection of the iPad and allows the measurement of UV and blue light.

Rodenstock – one advantage here is that no clip on the frame is needed. ImpressionIST, ImpressionIST Avantgarde and ImpressionIST 3 allow 3D video centration measurements, including pupil distance, fitting height, corneal vertex distance, pantoscopic tilt, face form angle and box dimensions of lenses. They have two cameras in there so they can take pictures from different points. The DNEye Scanner will measure the lower and the higher order aberrations of the patient, for distance viewing (with large mesopic pupil and small photopic pupil) and near view. This data may be used for optimizing lenses and computing autorefractometer results.

Seiko have their Digital MultiTool. It is a tablet based solution. It will do all the measurements. It will check for conditions of convergence (inset) and check progression corridor length. Seiko supply the license for the app, the cover which goes over the iPad, the bridge to be fitted over the frame and the stand, if the optician wants to use it in a non-hand held situation.

PERSONAL OPINIONS

Hopefully in this part of the presentation I could show you that there are differences between these pieces of equipment and their measurements, which different manufacturers believe are important for optimization. Now we come to my personal opinions:

Up to now what I have tried to show you is what was said and what was written. I have some concerns about this industry. My concern is the following: if we are an industry, which we were in ten or fifteen years ago where we had unlimited growth, there was so much demand out there, to a certain extent we had to put out our scoop and catch it. We had the baby boomers getting older, but now we are getting into a situation where the growth of the optical market, of the need of vision correction, is slowing down.

What is happening is that the rate of growth of the population needing vision correction and using correction is slowing down. Why is that so?



THE FOLLOWING WORDS WERE PUT INTO GOOGLE
AND HITS ON THE FIRST FIVE PAGES COUNTED:

Individualized Progressives		Individualised Progressives	
Carl Zeiss Vision	14	Carl Zeiss Vision	17
Cristall Opticians	1	General publications	4
General publications	3	Hoya	2
Hoya	1	Multicon	1
Interoptik	1	Norville	1
Prats	1	Rodenstock	3
Rodenstock	1	Seiko	3
Tokai	1	Swiss Optik	1
Total hits	23	Total hits	32

Fig. 1: Google hits individualized and individualised progressives

Personalized Progressives		Personalised Progressives	
Carl Zeiss Vision	8	BBGR	1
Cristall Opticians	1	Carl Zeiss Vision	3
General Optical	1	Essilor	3
General publications	19	General publications	11
Hoya	4	Hoya	9
Oakley	1	Italentti	1
Poloptic	1	Jai Kudo	1
Prats	1	Multicon	1
Shamir	1	Nikon	1
Vision Rx	1	Precision Optics	1
Total hits	38	Rodenstock	1
		Shamir	1
		The Rajhan Opticals	1
		Waterside Labs	1
		Total hits	36

Fig. 2: Google hits personalized and personalised progressives

If you think about it, baby boomers, were born in the fifties and the late fifties. If you think about a great snake swallowing all the baby boomers, now the baby boomers are near the back end of the snake. That means the rate of growth of new people wearing spectacles is slower. The reality is a slowdown of the rate of growth of the population needing vision correction from 1.2% per annum to 0.8% per annum, which is a slowdown of 33%. We will feel that. There is no doubt about it.

Either we accelerate the repurchase cycle or bring more people into vision correction. A lot of people are out there, who should use vision correction but do not do so.

SWV write reports on new products at optical trade shows. To do this I visit manufacturers. Yes, it is nice talking to them but I have to spent now on average two hours on their stand

different parts of the world (UK, China and USA), to explain a similar activity, using their own words. They all used a similar language to describe the basic measurements.

To optimize an individualized progressive lens it seems to be important to take additional measurements. This at least is what I have been told. All the manufacturers take additional measurements. We have gone through them just now. But I am confused and ask: which measurements are more important than others? I also see the words individualized and personalized – these are used by many people all over the world. On one page in Google I wrote individualized progressives and on another page personalized progressives. Then I counted the number of hits on the first five pages. Congratulations on Carl Zeiss Vision, you definitely got individualized with 14 hits out of 23.

to understand their marketing message in a good enough way to be able to write it down on one and a half pages of paper. That concerns me because if that is the case with me (I'm not an optician or optometrist) I think it might be that a lot of customers have problems as well.

There are certain elements in the messages, which are easy to understand. I can understand the dominant eye message because I am a hunter. If I wanted to shoot with my other eye I would not hit anything. So I can understand this message. But when you go down one or two layers, there are messages, I believe, which are quite complex to understand. And they are not necessarily designed to grow the population using vision correction and using spectacle lenses.

What are the basic measurements?

To me there are four:

- | correction for distance vision
- | addition for near vision
- | the pupil distance
- | the fitting height.

SWV asked three consultants in

Then I did the same search with an "s" in individualized in Google. I got a lot more hits from more manufacturers with 32 hits.

But be careful! The words "individualized" / "individualised" are often linked to individualised care for aged people. "Progressives", when written with individualized / individualised turn up criteria, such as progressive pulmonary disorders and progressive dementia (figure 1). What will happen with personalized? Personalized strangely enough works a lot better. I got 38 hits with a "z" and 36 with an "s". The words "personalized" / "personalised" are more frequently used by journalists and academics when writing about the subject (figure 2). Very often in the US they will write customized or custom made.

Let us summarize. Based on demographics we are going to get a market, which is going to slow down, unless we do something about it. I'm not sure whether the messages we are putting out as an industry today are messages which the consumer understands, that good vision is extremely important for your life, your social wellbeing and a socially desirable aspect.



Mark Mackenzie

In 2001, Mark Mackenzie and his wife Ingeborg founded the company Strategy with Vision, a unique team of eyewear and eyecare consultants, conducting market research worldwide. The company had grown and developed with the establishment of an international team of consultants who bring added strength to eyewear and eyecare businesses and organizations.

Mark Mackenzie was formerly International Business Development Director for the ophthalmic business of Carl Zeiss. Before, he was European Regional Director of Sola Inc. His experience in the ophthalmic industry followed a career in consumer goods marketing, including L'Oreal and Tarket.