This data is from the annual survey initiated by Phil Morgan from Eurolens research in Manchester (UK). It reports on an assessment of 25,801 fits across 28 contact lens markets located in North America, Europe, the Middle East, Asia, and Africa. As in previous years, a prospective approach was used: up to 1,000 survey forms were randomly disseminated in each market to contact lens practitioners (ophthalmologists, optometrists, and/or opticians depending on the market), and information about the first 10 patients prescribed with lenses after receipt of paper or electronic survey forms was anonymously recorded (table 1).

When Professor Nathan Efron made the prediction in the late ’90s that RGP lenses would be nearly obsolete in 2010, the outlook was not very bright indeed. The heydays of RGP lens wear were in the ’70s and ’80s, but soon after that soft lenses gradually took over and quickly established a majority share in the lens market. Indeed, had that trend continued, RGP lens fits would have been drastically diminished by now.

But, just as revenue of investments in the past are never a guarantee for the future, this has not been the case and the trend didn’t continue. It is similar to extrapolating topography data from center to periphery when predicting the periphery of the corneal shape: any RGP lens fitter knows that the data...
may not be accurate if it is predicted rather than measured directly.

**2009**

Instead of a contact lens modality in despair, the RGP modality and industry—while not big—is very stable, healthy and is pretty much unaffected by the current worldwide economic crisis entering the year 2010 and the new decade.

Figure 1 shows the total amount of RGP lens fits per country in 2009, distilled from data that was published in the February 2010 issue of Contact Lens Spectrum. Figure 1 covers all types of rigid lenses (including orthokeratology, keratoconus lens fits etc). It is of interest to see that large variations remain in an otherwise globalizing society. Even within a relatively small market such as the European community, the differences are striking.

Looking at the RGP lens data in more detail, in analyzing the top 10 countries in terms of RGP lens fits in our survey (table 2), it is apparent that high Dk materials are the number one prescribed lens material, followed by the mid Dk (30–60) lens materials, while low Dk material lens fits represent a very low percentage used today. This is a trend that over the past decade has developed parallel to and even ahead of the trends in higher Dk soft lens materials (e.g. silicone hydrogel materials).

It appears that a relatively high number of lens fits is with ‘standard’ spherical corrections. Keep in mind, though, that our survey did not break down the indications for the lens fit. This means that, for instance, keratoconus and other irregular corneal lens fits, if they’re not toric or scleral in nature, would fit in this standard spherical category. Scleral lens fits, if at all measurable, would presumably fall under ‘other’ lens designs. Huge differences in specialty lens fits remain within the different categories. For instance, one would expect that in most countries the need for back toric RGP lenses is roughly within the same range. But while in Spain and Japan no more than 2% of all RGP lens fits is with toric lens designs, in Italy and Canada back toric lens designs are a significant portion of the RGP lens market (34% and 28% respectively). One can only speculate on the reasons for...
Does this show the power of education, and are the availability and the support of the local RGP lens manufacturing labs crucial factors in this?

**ORTHOKERATOLOGY**

The differences in the number of orthokeratology lens fits among the different markets is striking as well. In some countries orthokeratology is pretty much ‘under the radar’ in air controller terms; but in Spain and the Netherlands, for instance, 4% of all lens fits (soft and RGP) are with this modality. It should be taken into account that these numbers are survey data, with some obvious risks involved regarding who may return the survey forms. This is especially true when the total numbers are low when you break the data up into subcategories. So in other words, if the relatively low number of RGP lens fits is broken down into subcategories, a few survey forms biased to one specific modality can have a large impact on the total data. The survey data should therefore be seen as relative data, where trends can be seen.

Orthokeratology for instance has been popular in the Netherlands since its introduction. The survey data over the last years have consistently reported high numbers of lens fits with this modality, showing that it has gained a fixed and stable place in the contact practices in the Netherlands. That the data last year showed 6% total orthokeratology lens fits and this year 4% is most probably of lesser value than the fact that there is an overall trend towards a fairly significant number of orthokeratology fits.

**PRESBYOPIA**

The presbyopic group representing both monovision and multifocal lens fits comprised 9% of all RGP lens fits in 2009, again with large differences among countries. This number is roughly the same as in multifocal/monovision soft lens fits (10%), although it is not clear how much of this is monovision. But it is an interesting finding because the potential benefit with presbyopic correction in an RGP lens modality is large. Most presbyopic lens experts would agree that in terms of vision, RGP lenses outperform soft lenses. In theory this could mean that patients may be more willing to accept and adapt to presbyopic RGP lenses because the visual benefits could be exceptionally high. But our survey data does not support that theory in terms of actual lens fits. The data may show that presbyopia remains the modality with high potential in the RGP lens business.

**PLANNED REPLACEMENT**

Planned replacement with RGP lenses is still on the rise, and in some countries it was reported to be close to 100%. It is not specified exactly what this means (e.g. two yearly, yearly or more frequently?). If the extended wear rates within the RGP lens group mostly represent orthokeratology lens fits (which may be true for some, but not all countries), then the larger proportion of new fits versus refits may indicate that many patients enter this modality without previous lens wear and thus it does not cannibalize other lens modalities. But again, given the low numbers in these subgroups, outcomes should be watched with care.

**LOOKOUT FOR THE NEXT DECADE.**

The prognosis for the next decade may be different for different markets, and it appears hard to predict a general process for the entire market. Markets such as the US and the UK appear to have started their ‘initial descent’ a while ago and have reached their final destination, to stay within airline...
terminology. Other RGP lens markets have largely remained at a relative high altitude. In the Netherlands for instance, more than 30% of lens wearers currently use this lens modality. But with the lens fitting rate at a slightly lower level (but still at 24%), it seems like there may be some room for a change in rate. The next 10 years most probably will decide where the ‘final destination’ will be. In other words, it is time to fasten the seatbelt for arrival at the final destination. But at what altitude that will be is the question. If your final flight destination is La Paz, Bolivia, for instance, as the author once had the privilege of flying into, the airport is at 3,100 meters or 10,170 feet (the name of the airport is “El Alto”). Passengers have to fasten their seatbelt for arrival, but the airplane basically lands on the runway by just lowering its landing gear. On a personal note, the author believes that it is realistic to think that in every contact lens practice, regardless of the country in which it is located, there are between 10% and 30% of patients who could benefit from RGP lenses, with all of their well reported advantages (exceptional vision, superior corneal health and best safety record, etc). Especially when (growing) specialty lenses for the irregular cornea, improved multifocal lenses and also new modalities such as orthokeratology are taken into account.

The main question is really this: do lens fitters still have the skills to fit the lenses? That (lens fitting skills) is one of the variables that cannot be controlled for. Therefore, it is really difficult to make a prediction. However, the author is willing to make a prediction for the next decade: by 2020 it seems unrealistic that we will still be using trial lens sets to fit RGP lenses. RGP lens fitting will be largely digitized and based on corneal topography, topographically supplemented with wavefront aberrometry. If only the profession as a whole is willing to invest in this new technology. To make one final comparison using the Netherlands, it is estimated that 80-90% of lens practices have a corneal topographer in the Netherlands, while in the UK for instance this number is expected to be less than 15%. If we strive to embrace the new technology that is available to us, the outlook is pretty bright. Not only because modalities such as presbyopic lenses, orthokeratology and scleral lenses have great potential and specialty lens fits are getting a lot of attention recently, but because digitalized lens fitting will bypass practitioners’ skills to some extent (lens evaluation would still be the same, but lens fitting would be at another, higher, level) and comfort and corneal health will be improved. And there will be no need for trial lenses because most lenses will be fitted empirically. The best news is: new students will embrace this new technology and will regain interest in digital RGP lens fitting and design. If that prediction comes true, the future for RGP lenses for the next decennia, and beyond, is really bright.