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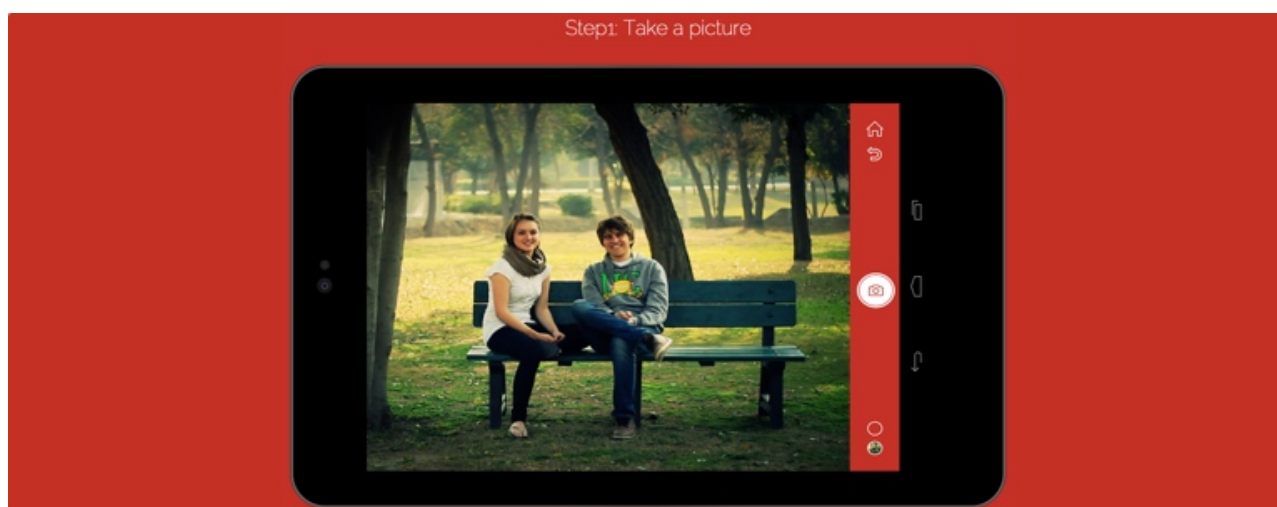
WORLD INTELLECTUAL PROPERTY ORGANIZATION

Starting Up in Pakistan

Eyedeus Labs Pvt Limited, Pakistan

With almost two thirds of its population under 30 years old and Internet access growing year on year, the Islamic Republic of Pakistan (Pakistan) is a healthy and growing market for online- and smartphone-based technologies (according to Ansr.io, 2013).

Taking advantage of this demographic and relatively new economy, Eyedeus Labs Pvt Limited (Eyedeus) is a university spin-off based in Lahore, the capital of the Pakistani province of Punjab.



Groopic is a smartphone photo app (Image: Eyedeus)

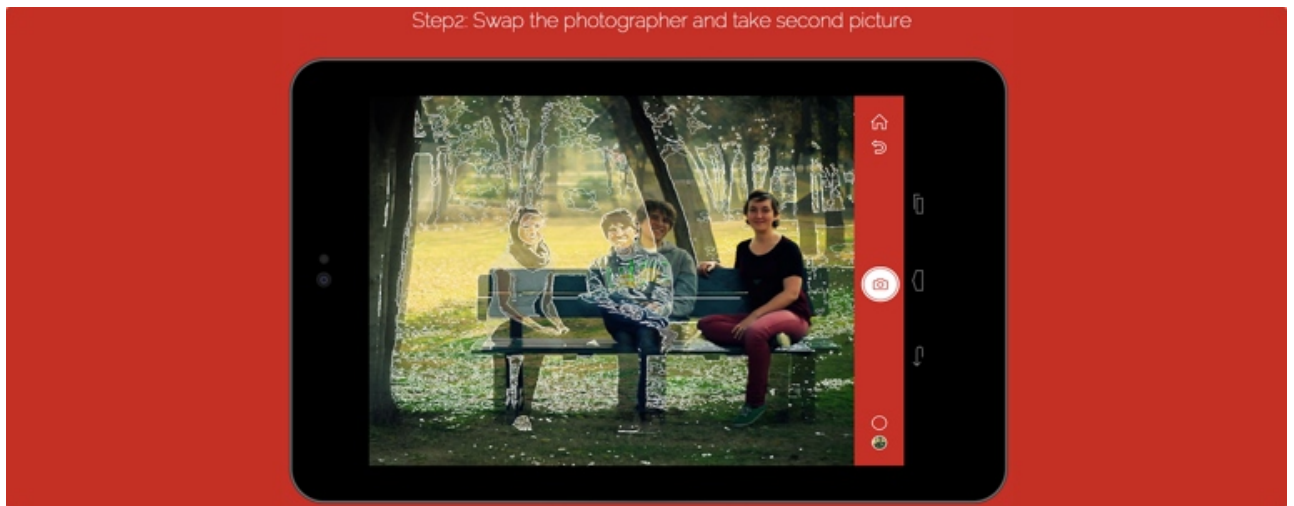
Founded in 2012, the small and medium sized enterprise (SME) develops computer vision technologies – including applications (apps) software – for cellphone and desktop computer platforms.

Perhaps the company's best known brand, *Groopic* is a smartphone photo app that is not only based on patent-pending technology; the software has propelled the company into the national and international sphere.

With *Groopic* and other products in development, Eyedeus has evolved into a dynamic company with a robust branding, partnership and commercialization strategy. As of 2014, the SME had become an award-winner creating new technologies for a young and Internet-savvy generation.

Invention

Eyedeus' flagship product, *Groopic* seamlessly merges two images into a single frame. By taking a group photo, for instance, a photographer can switch positions with a member of the group, who then takes a second picture.



Groopic aligns and merges two images into a single frame (Image: Eyedeus)

Groopic instantly merges both the first and second picture, and creates a single photo containing the entire group – including the original photographer.

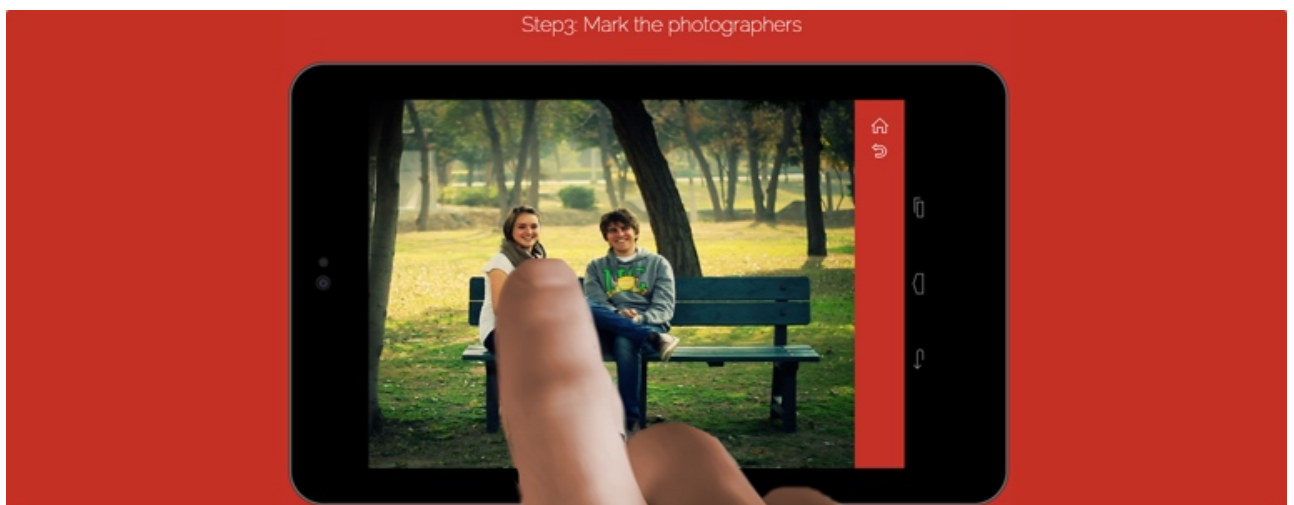
As a company advertising campaign said, “Take a picture. Swap the photographer and take the second [photo]. Mark the [position of the] photographers, and Groopic does the magic.”

Branding, commercialization, and partnership

With Groopic spearheading the SME’s market entry, Eyedeus has developed a robust branding and commercialization strategy.

In this way, the start-up has been able to grow in a national and international niche market for computer-vision technology – especially for mobile and desktop platforms.

To facilitate market entry, the company utilized the minimum viable product (MVP) model – MVP is a brand development and commercialization strategy favored by pre-revenue start-ups with a strong but incomplete product, such as Groopic.



Mark the photographer and Groopic will do the magic (Image: Eyedeus)

Using the MVP model, where a functioning product with minimal features can be launched into the market (via beta versions on the Internet, for example), companies such as Eyedeus receive quick, cost-effective and valuable feedback early on in a product's development cycle.

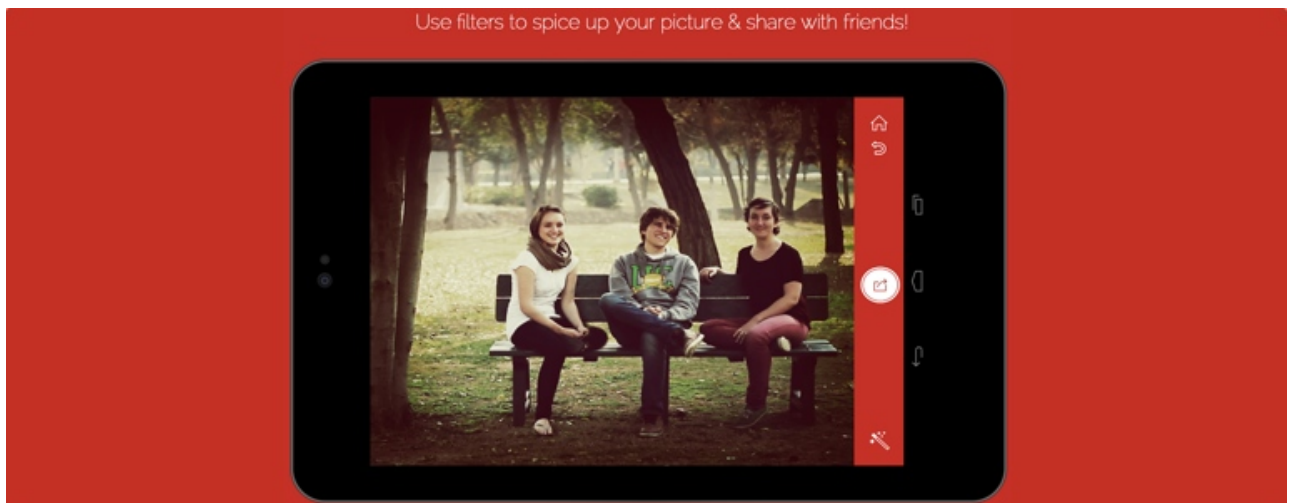
Groopic was launched online as an MVP via app stores in Pakistan and in other countries with similar economic and Internet user profiles – the country has per capita GDP of around US\$3,000 and around 30 million Internet users.

As a company spokesperson said, “We soft-launched the MVP of [Groopic via online app stores] in smaller economies [...] and got great feedback. [The launch] allowed us to solidify the product. In fact the response right back at the beginning of the idea has been phenomenal.”

Critically, Pakistan's majority young population has been developing a greater appetite for Internet-based mobile technologies; indeed, half of the country's Internet users access the web via cell phones (in 2013).

Start-up companies such as Eyedeus have developed products that are exploiting this new economy and demographic – through the MVP launch, the company received feedback from over 7,000 beta users of Groopic, including industry experts.

In addition to relying on the MVP model, the SME creates products with a natural user interface (NUI) – a term referring to interfaces that, while effectively invisible to a user, are relatively easy to master in the usual course of a user's experiences with a device or app.



With Groopic, everyone is contained in a photo (Image: Eyedeus)

Based on NUIs, Groopic does more than merging two pictures together; the app recognizes details such as the clothes worn by the subjects in a photo while also analyzing body shapes and the shapes of faces.

With such specialized and highly sensitive features, a user can manipulate a still image in real-time – changing the color of a subject's clothing, for instance.

Commensurate with Groopic, Eyedeus is developing a range of computer-vision NUI technologies – including *Trying Facewear*: an augmented face-gesture technology that maps images, say a tattoo, onto a (user's) moving face – that allow users to interface with their mobile or desktop device in fun and highly interactive ways .

As a company spokesperson said, “Using our computer vision technology, we aim to bridge the gap between vision research and industry and, in turn, reshape how people interact with smartphones and cameras.”

With a growing portfolio of products to hand, Eyedeus has taken advantage of Internet-based marketing and commercialization tools in order to enhance its brand identity and reach as many customers around the world as possible – especially users between 18 and 34 years old.

Following Groopic's launch, the company relied on established, online industry blogs in order to create market buzz. Inexpensive yet effective, the marketing strategy brought the app to the attention of technology companies and customers around the world.

Eyedeus has also maintained a corporate presence on the Internet (apart from the Eyedeus and Groopic websites) via popular social media sites including Facebook and Twitter – Groopic had over 5, 000 *likes* on Facebook and hundreds of *followers* on Twitter, in 2014.



Eyedeus is exploiting an emergent Internet and mobile-based economy (Image: Eyedeus)

In the same year, Groopic was commercialized in over 10 languages via Internet-based, software distributions markets such as iTunes™ and App Store™, both managed by Apple Inc. (Apple), an international manufacturer of telecommunications and computing devices.

The photo app, moreover, was compatible with a number of smartphone platforms (such as the iPhone, created by Apple) and operating systems (including Apple's iOS and Android, owned by Google, a multinational corporation).

Research and development

Eyedeus was co-created by five students and researchers – Ali Rehan, Aamer Zaheer, Abdul Rehman, Murtaza Taj, and Faraz Hassan. Excluding Mr. Hassan, the founding members were all based at the Computer Vision Lab of Lahore University of Management Science (LUMS), in Lahore, Pakistan.

With almost two decades of experience between them, the SME's founders have been keen to turn their expertise to the field of augmented reality – which includes research and development (R&D) of NUIs and blurring the boundaries between virtual reality and real-world environments.

Indeed, in addition to Groopic, the entrepreneurs have carried out R&D activities for NUI prototypes for the computer games industry. The researchers, for example, tested their face-gesture technology on the "Whacksy Taxi" mobile game, created by MindStorm Studios, a game development company based in Lahore.



The SME develops computer-vision NUI technologies (Photo: Eyedeus)

Going forward, Eyedeus's R&D has relied on collaboration with key players in the industry. The SME, for instance, won a place at Plan 9 – an entrepreneurs' incubator in Lahore, Pakistan.

Established by the country's government, Plan 9 mentored Eyedeus' founders on critical aspects of business development such as marketing, product design and networking strategy; indeed, the SME was the first Pakistani tech company to participate in this program.

Having completed the Plan 9 mentoring scheme, in 2013 Eyedeus won a place at BlackBox Connect (BlackBox) – an American business incubator and accelerator supported by Google for Entrepreneurs (part of the tech company's support network for innovators).

With BlackBox's strategic support (involving peers, mentors, and potential business partners and investors from a wide range of industries and backgrounds), the SME has been able to secure funds and expand its market reach.

Eyedeus's research strategy has also benefitted from the support of Arfa Software Technology Park, an information technology park in Lahore, Pakistan, where the SME had access to free office and R&D space.

Working with the support of government and industry partners, as of 2014 Eyedeus was seeking collaborations with major industry players such as Samsung and Huawei Technologies Co. Ltd., both being multinational conglomerates.

Patents, domain names, and copyrights

Eyedeus is keenly aware of the benefits that can accrue for a business by protecting intellectual property (IP) assets – including gaining key investors and expanding with confidence into new markets. To this end, the company has relied on the IP system.

Early on in its development, the SME applied for a patent on the photo imaging technology at the heart of the Groopic app.

The patent application – which is pending approval as of February 2014 – has been filed to the United States Patent and Trademark Office (2013) as well as the Intellectual Property Organization of Pakistan (2013).

In addition to the patent application, the SME has asserted copyrights over its software and IP assets portfolio – including its corporate website and domain names (both Eyedeus.com and Groopic.com are registered domains).

With a patent pending, Eyedeus has confidently entered collaborations with others while commercializing its flagship app around the world.

Business results

Within a few years of being founded, Eyedeus is making a big splash in the world of computer-vision and Internet-based technologies for mobile devices and desktop computers. In the process, the SME and its potentially game-changing app is meeting with business success and winning awards.

Eyedeus, for instance, won the Best Start Award (2012) held at Start-UP Weekend, an industry event in Lahore, Pakistan. One of the SME's founding members, moreover, was selected as a Plan 9 and BlackBox ambassador – a mentoring position for prospective candidates of both programs.



Eyedeus is meeting with success and winning awards (Photo: Eyedeus)

In addition to winning awards and peer recognition, the company's photo app has received rave reviews from a number of industry experts including CNET – an American tech review and publication company with a global reputation. According to a CNET editorial review, Groopic is "A must-have for getting the photographer into a group shot."

As of 2014, Groopic had over 300,000 users. Indeed, the app's launch (in late January 2014) was a success that added 150,000 new users (of Android and iOS platforms) in less than a month.

In the same period, the latest version of the photo app (version 1.3) was available on a number of e-commerce platforms and smartphone devices – including iTunes and Android, respectively.

Eyedeus, moreover, has an advisory board which includes Shehryar Hydri (Chief Operating Officer of Trango Interactive, a game development company, and Director of Scrybe, a technology company) and Fadi Bashara (founder of Blackbox).

Eyedeus has also been incorporated as a *Delaware Corp* in the US state of Delaware, which has a longstanding reputation for being business-friendly, under the name of Groopic Inc. The US based office currently deals with business development opportunities with international clients.

Say Cheese!

With the advent of the Internet and smartphone technologies, entrepreneurs around the world are beginning to realize new opportunities presented by a new market of tech-savvy consumers. Eyedeus is keen to show how an SME from a low income country with high ambitions can leverage its IP assets in order to compete and collaborate with tech giants from highly developed economies.

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- [Eyedeus Labs makes it to Black Box](#)
- [Eyedeus Labs Selected for BlackBox Connect Summer 2013](#)
- [Pakistan Market Trends 2013: Online, Mobile, Social – Things Are About To Take Off](#)
- [APICTA2013 – Hong Kong: Winners and Merits](#)
- [App Annie: Groopic](#)
- [Apple: Groopic on the App Store](#)
- [Blackbox Accelerate](#)
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- [Eyedeus](#)
- [Eyedeus Labs Launches Groopic on Android, Changes Monetization Strategy: The Group Photo App to Include the Photographer](#)
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