# PR FOR ROBOTS

by Sarah Cockburn-Price

The DIY Approach

### What we'll be covering

- What is PR?
- Headline writing group exercise
- First paragraph writing group exercise
- Quote writing group exercise
- How to order a press release
- Press release distribution
- The importance of images
- Social media
- Websites
- Salutary tales

# ABOVE THE LINE

Advertising, Free gifts, Sponsorship, Spending lots of money...

# BELOW THE LINE

PR, Viral social media campaigns, Stunts – it's all free!

# THE MUDDY WATERS

Supported puff pieces and colour separation charges

### PR has undergone huge changes...

PR in the old days

PR today







My First Client in 1991

Where is he now???



# It's all about priorities...

PR is bottom of almost everyone's list.

The huge advantage of scientific research is that it is almost always NEW and therefore interesting to the media.

You just have to present it in the right way.

### The Double-Edged Sword

There are great advantages being a scientist communicating your own message

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There are disadvantages being a scientist communicating your own message

# FEATURES VS. BENEFITS

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The laziness of journalists and the importance of spoon-feeding them.

### Group exercise: Write a headline from this text

"THERE are typically 28 separate operations needed to make an average shoe. All are highly skilled, manual tasks. This could be set to change. ROBOFOOT is a consortium formed last year that is seeking ways to overcome the complexity inherent within an industry so dependent on handcrafted production.

Gian Paolo Gerio, performance engineering manager at Comau S.p.A., said: "We share a dream that one day it will be possible to simply go into a shop, have your foot scanned and have the style you choose made for you there and then using the last most appropriate to your foot shape."

### ROBOTS POISED TO PUT A SPRING IN THE STEP OF THE FOOTWEAR INDUSTRY

# STANDING BACK FROM THE INFORMATION

What's important? Capturing imagination. Pitching it at the right level.

### Group Exercise Write the first paragraph from this paper from the International Journal of Robotics Research:

### Abstract

RGB-D cameras, which give an RGB image together with depths, are becoming increasingly popular for robotic perception. In this paper, we address the task of detecting commonly found objects in the three-dimensional (3D) point cloud of indoor scenes obtained from such cameras. Our method uses a graphical model that captures various features and contextual relations, including the local visual appearance and shape cues, object co-occurrence relationships and geometric relationships. With a large number of object classes and relations, the model's parsimony becomes important and we address that by using multiple types of edge potentials. We train the model using a maximum-margin learning approach. In our experiments concerning a total of 52 3D scenes of homes and offices (composed from about 550 views), we get a performance of 84.06% and 73.38% in labelling office and home scenes respectively for 17 object classes each. We also present a method for a robot to search for an object using the learned model and the contextual information available from the current labelings of the scene. We applied this algorithm successfully on a mobile robot for the task of finding 12 object classes in 10 different offices and achieved a precision of 97.56% with 78.43% recall.

### Could Robots be the solution to the perennial problem of our lost keys?

ROBOT Researchers have developed an algorithm for teaching robots to recognise objects and fetch them in cluttered places, such as offices, or houses. Generating 3D point cloud data to build up 3D models of a robot's environment has been the subject of much research over the last twenty years, but the stumbling block has always been the robot's limited ability to group varied objects together in subsets. With an 84% success rate, the new method captures various features and contextual relations, including the local visual appearance and shape cues, object co-occurrence relationships and geometric relationships. The same team has taken their research to the next level by teaching the robot to infer contextually likely locations for the desired objects. The robots outperformed expectations by finding 97% objects in cluttered scenes. Perhaps the perennial human frustration of lost objects can one day be outsourced.



### Good Quote Example:

"Until now, thanks to a reliance on large scale, mechanised agriculture combined with cheap labour in emerging economies, the routine deployment of robotics has been confined to a small number of specific tasks, such as milking, feed distribution and farm cleaning", explained Prof. Simon Blackmore, head of Engineering at Harper Adams University College.

### Another Good Quote Example:

"We've started with a clean sheet of paper", commented Blackmore. "We're re-evaluating the whole approach to agriculture. The potential boost to production we could generate if harvests were staggered to suit the crop rather than mechanisation is immense."

### Quote Writing Group Exercise:

With techniques for ultra high throughput screening in the life science sector making ever more onerous demands, the teams of lab technicians working in freezing conditions were faced with an increasingly impossible task. A robotic -20°C storage facility for chemical and biological samples has led to significant improvements in the productivity of Sanofi-aventis in the drug discovery process.

# Here is my quote, entirely fictional apart from the numbers, as I never interviewed him!

Olivier Casamitjana, Toulouse Chemical Library head, Sanofi-aventis R&D: "We now have 100% traceability of all our compounds, because each operation is tracked by the system. Also, even though the teams staffing the three laboratories only work office hours, the robots within the stores are set to work overnight, meaning orders are fulfilled and waiting in the buffer store for the next working day. To a robot, the difference between an order of a single compound, or an order of 1,000 compounds, is small. To a person, the difference is vast."

# THE RULES OF PRESS RELEASE ORDERING

### Why Software Could Hold the Key to Tea and Coffee Breaks of the Future



When you really think about it, making a bog standard cup of tea or coffee is surprisingly complex. One really needs **all** one's senses and there the co-ordination of movement too. Yet this seemingly unexceptional challenge has been exercising the mighty brains of robotics experts for the last twenty years.

One such is Dr. Michael Suppa, head of Department Perception and Cognition at the Institute of Robotics and Mechatronics at the German Aerospace Centre (DLR). The interdisciplinary team of mechanical and electrical engineers as well as software developers have been working on "Rollin' Justin" for two decades. He admits: "Justin must be able to assess risk and decide what to do next by using his sensory system to validate data. This is why we've set it the tea and coffee making challenge. Currently, it is being programmed to follow a set series of tasks to make those drinks, yet we are challenging it to make the drinks in much the same way you or I would."

The first thing Justin must do is interpret the objects he can see with its stereo camera system and understand their significance to the task. Here Dr. Suppa is working with researchers across Europe to further develop Justin's abilities. Dr. Andrew Davison at Imperial College, London is co-operating with DLR's researchers in the sphere of navigation. "Once the robot starts moving and the scene is updated, the map he builds just gets better and better, but it is very complicated and very graphics card processing power hungry", says Dr. Davison.

Dr. Suppa concurs: "Once we made Justin mobile, it got a whole lot more complicated and we had to go back the drawing board, algorithm-wise. We are constantly challenging Justin and making its life a little bit harder. First it had to find the objects required to make iced tea and understand which tasks to do in what order. Just to be really mean, we introduced transparent mugs, which flummoxed him for a while. Then we introduced a filter coffee machine and he had to use his sensors to realise how much to push. We just keep introducing more and more variants and making our scenario more complicated as a result."

Even when Justin knows what objects he is working with and what it should be doing with them, it still has to decide where to grip the object and how tightly. The sensors in his fingers allow him to make little adjustments as his initial touch turns into a grip. As research partner, Dr. Jeremy Wyatt at University of Birmingham explains, "we aren't as visually guided as you might imagine. Trivial tasks are hard. Humans are very good at estimating the weight of an object before they interact with it, so they can answer the question, "how will this object move if I apply these forces?" Bit by bit, Justin is using learning as a predictor to both mass and the forces he needs to apply over distance. Although the complexity is still mind numbing for this goal to be achieved, computer processing power has progressed so rapidly, it is now a goal that is seen to be achievable.

# Boilerplates

- EUnited Robotics, European Robotics Association, was founded in 2004 by major European robot manufacturers. EUnited Robotics serves as a platform for manufacturers, component suppliers, and system integrators of robotics in Europe, creating a network of industry leaders. EUnited Robotics is the robotics industries' voice in Europe representing the robot suppliers' view on industry issues and R&D policies. The association is also a cooperation platform among all robotics stakeholders – from research institutes to national associations and customers.
- Members: ABB (Sweden), COMAU (Italy), Güdel (Switzerland), ISRA Vision (Germany), KUKA Roboter (Germany), Reis Robotics (Germany), Schunk (Germany), Spinea (Slovakia) and SUMITOMO (Germany)
- Cooperation partners: DLR German Aerospace Centre (Germany), Fraunhofer IPA (Germany), and Technische Universität München (Germany).
- (http://www.eu-nited.net/robotics/)

# DISTRIBUTION



### Dull Pictures...





### More in the Hall of Shame...





### By Contrast, Successful Images...





# More Winning Images...





# RE-USE YOUR WORK IN DIFFERENT WAYS





On Facebook



# Here's mine:

(a) echordplusplus Kick Off Meeting in Mallorca giving presentation on PR for roboticists to super brainy audience. #Robots **#Robotics** 

# WEB SITES

# More Spoon-feeding...





# BLOGS

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# FEATURE ARTICLES

# IT'S ALL ABOUT BALANCE

# YOU'LL NEED SOME LUCK...