

characters and their costumes. Proboscis decided that the two characters were the best way of giving their costumes a shape, to cut them into something that contained all of the complicated and disparate ideas about location and the interactions between participants and technologies involved in the event.

For the costumes to work with the other project objectives, they needed to fill certain requirements. For example, the cloth used to make the costume had to be strong enough to hold the electronic parts for the sensors. Both costumes were equipped with LED displays that indicated the levels of each element measured by each sensor and a symbol for each environmental sensor was embroidered next to its respective display. The team chose to place the environmental sensors in the masks of the costumes. This meant that both costumes required masks that had "enough room for the sensors to be concealed but have a free air flow around them." By using the large snouts of both masks (hence the name of the project), the costumes elegantly extended the character's metaphorical ability to "sense", or sniff, the pollutants in the air. This free air flow around the

ordinary, exceptional, that informed the choice of territory, to produce something out of the familiar, it was this desire to enter unfamiliar



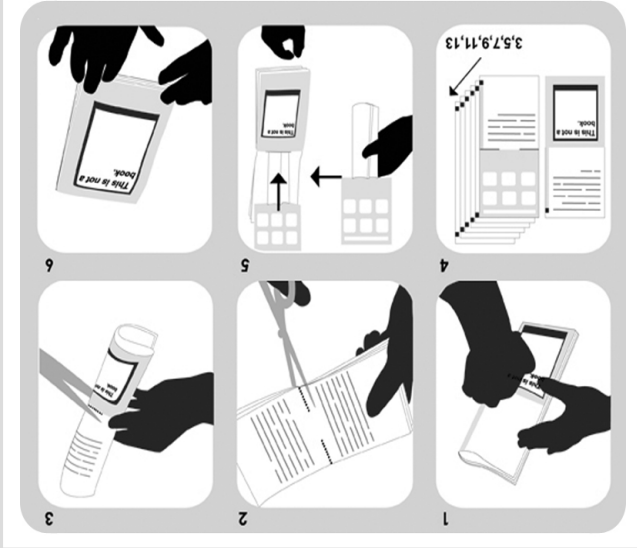
Arguably, it was this desire to enter unfamiliar territory, to produce something out of the ordinary, exceptional, that informed the choice of making a real statement in a communal space. "is a performance." That, if you wear it, you're thought: "What if the wearable is something that seemed to me to be very consumerist. And so we wearable technology which, in many ways territory of, you know, artists and people doing to do was to not get into that whole familiar individual. [...] One of the things we were trying about you. Because it's about your identity as an anything about place and locality. It says more and something cool on a handbag, it doesn't say And the thing is that if you shove some sensors conversations and it's about locality and place. about making a statement, it's about creating authoring was actually around social activism. It's "A lot of the work we were doing around public

There is something implicitly irreversible about cutting. We've all felt that sense of permanence as the scissors slice through paper or fabric. Once the first cut is made, there is no turning back. Measuring, however, does not seem as risky. As the saying goes, one is encouraged to measure twice before cutting. Maybe even thrice... Or whatever amount it takes for one to be certain that the cut will be accurate. Measuring ensures that, despite a cut's irreversibility, it was the right one to make. But there may be circumstances when measuring is not an option. In such cases, taking the risk of cutting may be better suited to the situation than measuring. It is with this in mind that I want to explore the case of *Snout*, an artistic project developed by Proboscis in collaboration with Iniva, an arts centre in London. Proboscis is an artists group that produces works in collaboration with a seemingly endless number of practitioners of other disciplines including "business, industry, the arts, education, government, civil society and academia". Arguably, Proboscis is a group of artists who work in the real world, where one quickly encounters the messiness of the social, political and/or

A case study of the Snout project

# Measure Once, Cut Twice

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 Measure Once, Cut Twice**

economic pressures on a local and global scale. It is difficult to fathom how artists can produce artworks in such a tangled mess, particularly if they tackle complex issues such as the environment, poverty, or urban regeneration. What can artists contribute to our understanding of these issues that a report or a statistical model produced by a group of informed experts cannot? I would argue that it is artists' particular way of *cutting* into such issues that makes their work valuable.

The concept of *cutting* in this case is inspired by the work of anthropologists, such as Marilyn Strathern, who use the term to designate how people and objects set the limits of social and technical relationships in time and in space how they *cut out* new limits to the fabric of our daily life. In this case, I employ cutting as a way of understanding how certain objects, and their related meanings and uses, function as a means of encompassing a number of socio-technical relationships between different technologies and people. The following is therefore an attempt to use the concept of cutting to better understand how Proboscis produces a creative work such as *Snout*. I will begin by relating some of the details

of the commissioning of the project followed by an analysis of how Proboscis and its collaborators interpreted the challenges and proposed a set of solutions for the project.

**Commissioning the work**

In November 2006, Iniva, with the support of Arts Council England and the Esmeé Fairbairn Foundation, commissioned Proboscis to produce an artwork as part of their 2007 arts programme. 2007 represented an important year in for Iniva as it would soon open its new permanent location at Rivington Place in Shoreditch, East London. At this point, Iniva was already familiar with some of Proboscis's earlier works. Proboscis chose once again to collaborate on *Snout* with staff and students from Birkbeck College's School of Computer Sciences and Information Systems. Proboscis and Birkbeck College had collaborated on an earlier sensing project, *Robotic Feral Public Authoring*. Part of this project consisted of producing two mobile electronic sensing robots to be used in community events. These robots were created by affixing cheap environmental sensors to toy robots that could be operated in situ by anyone. The corresponding location of the data collected by the robots through the sensors was

account provides only a partial picture. Although this essay has examined aspects of how artists work within interdisciplinary projects such as *Snout*, the texture of this exceptionality - who values it and why - remains unclear. To find an answer, wider relations of power and their circulation in and around such work must be analysed. Based on the results of this initial foray into Proboscis's work, I believe that a broader and more in-depth examination of how these exceptional cuts are produced and articulated over time may answer such questions. Until then, we may never know if Mr. Punch and the Plague Doctor will ever cut again.

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 London, January 2009

<http://socialtapestries.net/snout>



Although Proboscis provides a recipe for their reanimation, it is the environmental sensors and the relationship with Birkbeck College, as well as other projects, which occupy their time. Just as Mr. Punch and the Plague Doctor produced a new project from *Robotic Feral Public Authoring*, a more recent project, known as *Sensory Threads*, will soon bring a new cut to all of this work. This seems to be part of the role that Proboscis plays in these strange and complex projects: to take-on the demands of a commission - the interests of stakeholders, the budget, the related technologies and topical subjects - and producing something exceptional for those around them and sometimes, as in the case of *Snout*, even themselves. This is not to argue that Proboscis deplores measuring, quite to the contrary in fact. Rather than measuring only in anticipation of the act of cutting, thereby keeping the two actions distinct and limiting the potential for the unexpected, the team articulates their work through the results of the cut as measurement.

In using the concept of cutting, I have shown how artist groups like Proboscis are able to create meaningful works in collaboration with others that do not shy away from the real world. But this

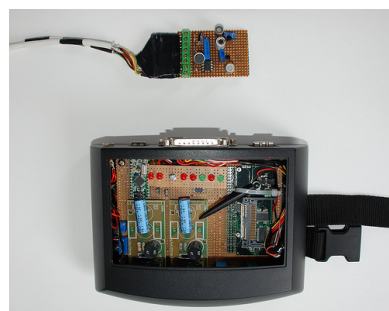
then uploaded to an online map, providing geographical representations of the environmental data on the web. One of *Robotic Feral Public Authoring's* objectives included demonstrating to people in everyday situations how to collect data about pollutants in their neighbourhood as part of hobby groups or other similarly playful yet familiar activities.

These aspects of *Robotic Feral Public Authoring* formed the basis of Iniva's commission. Snout's contributors agreed that it should "build" on the previous collaboration in order to produce a new public event taking place in the vicinity of Iniva's future location, making use of the mobile sensor technology and promoting community engagement. Iniva approached the team with an established budget and timeframe. The event would take place sometime between mid-March and early April leaving the team only five months to plan and execute the project. Seen in this light, the commission consisted of a number of constraints including limited resources and little time to deliver the commission, but it also represented a number of opportunities. Firstly, the new project gave the Proboscis/Birkbeck College team a chance to implement new

was visible to onlookers). Members of the team felt that making this information clearer and more visible to the performer and to the audience could represent an improvement if the event were ever reproduced. Such findings would have been difficult to uncover prior to a field tests with the performers, something that circumstances and the timeframe did not allow. Unfortunately, there was little opportunity left for the team to mull over such issues as it came time to move on to new projects.

Can Mr. Punch and the Plague Doctor cut again? About 18 months later, as I attend the *Digital Cities: London's Future* exhibition at the Building Centre in London, I meet what is left of Mr. Punch and the Plague Doctor in person. They stand there, immobile and somewhat deflated next to other artefacts of Proboscis's past events including their ancestors the Feral Robots. I wonder if the two will ever come to life again and what bringing them back would mean. Can Mr. Punch and the Plague Doctor cut the same way twice? Or is their value unique to the single *Snout* event? We may never know since *Snout* was not designed as a recurring event.

The clock was ticking. There was little time left before the event, few resources at the team's disposal, and much work to do.



technical developments on the sensor array: the sensors could now be modified to save the data to portable USB memory sticks, their battery life could be significantly extended, the team could devise a way to display the sensor readings in real-time on site (instead of only online). But it also gave the team a chance to test new ways of putting the sensors into service. Proboscis wanted to experiment with other, unexpected means of integrating the sensors, and the process of measuring environmental data, into a public event. What remained for Proboscis to determine was what form this new implementation would take.

club venue. Mr. Punch and the Plague Doctor set off into the streets of Shoreditch with their snouts and sausages to cause mischief, while their sensors read the environment, followed by closely the team armed with postcards explaining the project for any interested onlookers. The event ran smoothly and the team soon found themselves back at Cargo with an audience of interested participants to discuss participatory sensing and view the online display of the project's sensory data.

As the event came to a close, it was now the team's turn to measure their results: collect feedback from the participants, conduct a post-mortem of the technology's operation, and relay their findings to stakeholders. Some of the findings of these assessments resulted from the unanticipated consequences of the performers' experiences with the costumes. For example, although the actors improvised the actions of the two characters, they could not see the results of the sensor readings displayed by the LEDs stitched into their costumes. Their large masks limited the peripheral vision needed to view them. Because of this, the performers did not react to the variations in the data (even though the data

### Cutting characters

It is this challenge - how to implement a series of technologies, activities, and ideas similar to the ones first developed in *Robotic Feral Public Authoring* in a different way - that required a cut on the part of Proboscis. How would the participants use the sensors? How would they relate to the data? How would the team communicate its ideas about measuring pollutants in our environment and the importance of community engagement? Before the team could plan any of the technical or logistical requirements, a decision had to be made about how all of the constraints and aspirations of the commission would come together in one coherent event. Enter: *Mr. Punch* and the *Plague Doctor*.

In the early days of the project, members of the team generated ideas about how to approach the commission in a way that would engage the community. A dominant theme was the Carnival and how some of its cultural traditions could be used to create a playful yet meaningful atmosphere for the event. Team members investigated the history and activities surrounding a number of European carnival tradition. Reading team notes produced over the course of the

insufficient. The team must now find a way to ensure that the cut makes sense. They must articulate the meaning of the cut, particularly in dealing with the exceptional challenge of choosing actors for the characters. None of the members of the team were actors. Nor was anyone familiar with the conventions of finding and hiring professional performers. Over the course of the next few months, contacts had to be made, research had to be conducted on what kind of performer would best suit such an event, performers had to be hired, time for these performers to test the costumes and to develop the characters' voices had to be scheduled. Due to the size and weight of each costume, the performers needed to be relatively tall and of a sufficient build to carry all of the components. The team chose two performers, Bill Aitchison and Jordan Mackenzie. They all met ten days before the event to discuss the characters and tryout the costumes. Time constraints and budget restrictions meant that there was little time to practice.

The event took place on Tuesday, 10 April 2007. Since Iniva's new building was not yet open, the performance began and ended at *Cargo*, a nearby

project, I found a summary of the project's objectives and results using the analogy of a step-by-step account of what ingredients should be used to reproduce the Snout project. The recipe begins with two characters, Mr. Punch and the Plague Doctor, who would help to produce an aura of the carnival in order to "suggest fun and engaging ways to collect data about the environment". The document goes on to explain how the data is to be collected using sensors, which placed in these characters' costumes, which measure carbon dioxide, carbon monoxide, benzene and noise. Proboscis proposes this recipe as a way of generating a playful *dialogue* among the event's participants about the health of their local environment. It is a way for residents in a community to engage in what Proboscis calls "participatory sensing", a practice used in *Robotic Feral Public Authoring* that involves measuring aspects of the community's environment by members of the community rather than leaving it to government agencies. The artists hope that participants will question the instrumentalisation of their surroundings by technocratic interests and discover the complex contradictions embedded in the debates concerning

measuring - through the masks design, through the stories that brought them to life, through the sensors that are stitched into their clothing - as the *Feral Robots* were in their way. What changed was what was said by measuring. One could argue that all acts of measuring have a meaning, be they performed by an expert or a layman. Through *Snout*, the team cuts out a different, exceptional meaning for their measuring. A measuring that is unfamiliar to those involved in which the measurers are given centre stage rather than hiding away in a laboratory or office building.



But this cut does not bring us to the final event. Now that the cut is made, the members of the team must deal with the results of what they have produced. The simple act of cutting is

environmentalism. In this sense, it is not so much the particular results of the measurements that matter to Proboscis as much as the conversations and observations among participants that take place during and after the act of measuring.



These two characters, I would argue, were what constituted the cut that allowed all of these disparate ideas and objects to come together. This is because, although there had been a considerable amount of research and reflexion that went into planning the event, the two characters became distilled representations of the

practical issues of creating the costume and its technological undergarments were being resolved. And it is here, I believe, that I can provide an answer to the other earlier question: "Why measure in the first place?" By choosing to make these costumed characters, Proboscis cut something exceptional from a project that used a number of practices and technologies developed in previous projects. Mr. Punch and the Plague Doctor became at once an embodiment of the sensors as a collection of the and previous experiments, an embodiment of the event itself as a community carnival and as a chance to collect environmental data, and finally, as the embodiment of a publicly funded collaboration between a number of interdisciplinary stakeholders that included Iniva, residents of Shoreditch, the Arts Council England, the Esmee Fairbairn Foundation, Proboscis and the School of Computer Sciences and Information Systems at Birkbeck College. It is in this sense that I argue that the project is cut: all of the ideas, the activities, and technologies were now centred on our two new characters (what Bruno Latour might call *hybrids*) Mr. Punch and the Plague Doctor. The two are as tied to the act of

project: one of the tangible points of connection between the hopes and constraints set by the commissioners, the research and work of the team, and the participation of the community. At this point, one might wonder: "Why these characters, of all things, for such a complicated set of information and issues?" or "Why bother measuring with sensors in the first place, for that matter?" I will begin by answering the first of these two questions, as it relates directly to the concept of cutting as developed up to now. The result will then give me something to better answer the second question. One can find a number of reasons to explain Proboscis's choice of characters. First, there is context: the two characters are associated with carnivals. Proboscis interpreted the carnival as a familiar public event for local communities. Carnival characters perform in these public neighbourhood gatherings. Therefore, employing carnival characters helped the team to delineate the scale and scope of the event while respecting the constraints put in place by the commission. Secondly, Mr. Punch and the Plague Doctor proved to be fertile symbolic sources for the Proboscis. In Mr. Punch, whose legend was traced

This was partly why the team chose to use outlandish costumes. But in order to successfully deploy the costumes, the individuals wearing them had to perform the characters. This meant that the individual's work of measuring was not only to wear a funny costume and work with a computer, battery pack, and GPS unit on a belt or backpack which was connected to a network of sensors. Nor was it simply to transmit a number of environmental pollutants to a website during a public event. An integral part of the process of measuring was about making all of the ideas and all of the stories that made-up these two characters visible to participants in a real-time, everyday setting. This required the team to find a way of, quite literally, giving a voice to the measuring, giving it a gait, a posture, an accent; all things that told people who was measuring as much as what was being measured. Hardly something that could be expected of anyone "off the street". As the costumes began to take shape, the complexities of this challenge took our team as much by surprise as it surely must surprise one of Mr. Punch's unsuspecting victims when he encounters her on the streets of Shoreditch. Unexpected ideas and new potential directions for the event were appearing just as the seemingly

snouts included a sufficient amount of distance between the sensors and the breath of the individual who wore the costume. Which brings us to the final, most complex and exceptional requirement for the costumes: both costumes called for a performer, an individual, to bring the character to life? I do not use the term exceptional here to mean 'excellent', but to emphasize that it represented a break from previous projects, an immeasurable quantity, if you will. Although the team knew well in advance that individuals would have to wear the costumes as part of the event, who those individuals should be and how they should wear the costumes could not be ascertained based on earlier projects. Previously, *the Robotic Feral Public Authoring* invited everyday participants to make use of the sensors. Almost anyone "off the street", they hoped, would be able to use the sensors. In this case, as indicated in the above quote, members of the team believed that simply inviting participants to wear only the sensors in an everyday context produced connotations of consumerism or fashionable goods that were not suitable for the project.

back to the traditional *Punch and Judy* puppet shows and the *Commedia dell'arte*, Proboscis perceived an "allegory of the complex desires and actions that can be seen in Western consumer culture". Mr. Punch was a troublemaker who challenged all authorities yet took on no responsibilities. As one member of the team put it:

*"He is the trickster, the Lord of Misrule - that's important here - he's allowed to say things that would not be allowed elsewhere. But he is an unpleasant, possessive, destructive narcissistic character - he destroys everything he loves."*

As for the Plague Doctor, he was a kind of creepy quack of the Italian renaissance transplanted into the 21st Century. The character was based on traditions from the Venetian carnivals based closely on the actual plague doctor costumes of the 16th Century. It was thanks to these provocative characters' rich histories that Proboscis was able to generate a series of themes and stories for how they would generate a Carnival atmosphere. The characters suggested literature references from Hogarth to Ionesco. They were affiliated with events - the great plagues of Europe in the case of the Plague

Doctor - and related to other characters - Judy, slapstick in the case of Mr. Punch. The characters' rich symbolic ties helped the artists to produce "what if" questions that might sound like: "What would Mr. Punch do if he were alive in this time?", "How would the Plague Doctor relate to the environmental catastrophes of today?" The artists could then use their answers to sketch out experimental scenarios for the event. For example:

*No. 5 In which Mr Punch and the Plague Doctor are invited to a joyous Carnival. They gather food, prepare several dishes (what are the dishes), share the feast.*

The third reason for selecting such strange characters for an environmentally related, community based project is that it enabled the team to produce costumes. Some members of the team are interested in testing wearable sensors as a new and different solution to mobile data collection: