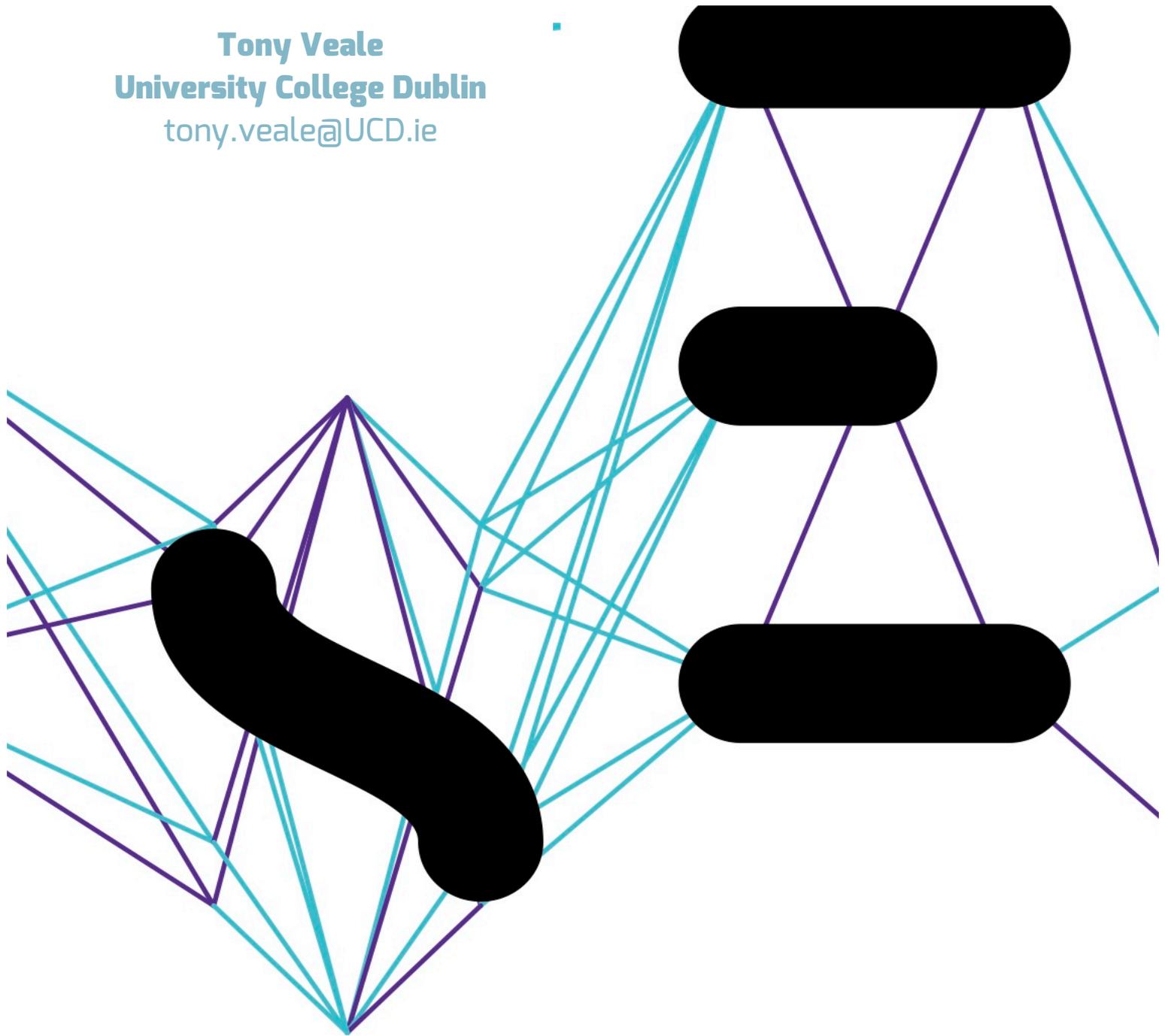


Year Three Management Report

Deliverable: D5.3

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Management Report, Year Three

1. Introduction

The PROSECCO project has now been operational for more than three years (42 months). In its final year it has extended its initial and mid-term goals in terms of *outreach, education* and *field-development*, as well as in *management/coordination* of the above activities. This final year has not been an especially busy year from a management perspective, and in many respects it may even be considered the quietest. Nonetheless, in this final period we have striven to secure the PROSECCO legacy for life in the CC community post-PROSECCO.

This report outlines and explains the management decisions that contributed to the implementation of each of these activities, and summarizes the outcomes in each case. We begin, in section 2, with a summary of the period 3 goals of the coordination action, and of the deliverables that were to be completed in achieving these goals. But first, we briefly recount the meetings that contributed to PROSECCO's direction in the past 12 months.

1.1. Project Meetings in Year Three

As in previous years, the CC calendar has provided a surfeit of occasions at which a quorum of PROSECCO members will inevitably meet and discuss the work of the coordination action. Given the number and variety of these occasions, it has not been necessary in the past 12 months to organize a dedicated PROSECCO management meeting. Rather, decisions have been made in small groups at international meetings, and shared and agreed by all in subsequent action-wide emails. Regarding the outreach goals of PROSECCO, it has helped considerably that a good deal of these international meetings have concerned other EC-funded creativity efforts, or creativity-focused workshops and conferences.

For example, the past 12 months has seen meetings for the EC-funded creativity projects WHIM and ConCreTe, and at least one workshop organized by the COINVENT project. PROSECCO members were present at each of these meetings, if perhaps different subsets of its memberships in each case. A WHIM project meeting in February 2016 brought together Simon Colton, Pablo Gervas and Tony Veale, while a ConCreTe meeting in April 2016 provided a reason for Pablo Gervas, Geraint Wiggins, Nada Lavrac, Hannu Toivonen, Amilcar Cardoso and Tony Veale to meet and discuss PROSECCO business. In fact, Tony Veale was invited to speak at this meeting in part because of the opportunity it afforded to consider the last months of the PROSECCO project.

As in previous years, the annual conference of the Association for Computational Creativity (or ACC, whose charter was a year-one deliverable for PROSECCO) also provided an opportunity for PROSECCO members to meet and discuss the final business of the action. The ICCA conference (International Conference on Computational Creativity) was held in Paris in June 2016, and also allowed international advisory board members Graeme Ritchie, Dan Ventura and Rafael Perez y Perez to join the discussions.

Opportunistic thinking has allowed us to capitalize on other occasions to meet with members of the advisory board face-to-face. In June 2016, for instance, Dublin was host to the International Society of Humor Studies and its annual ISHS conference. We thus used the opportunity to bring two advisory board members with strong interests in humor-related CC research to Dublin for a special theme session on computational approaches to humour, namely Oliviero Stock and Graeme Ritchie. Small-scale meetings such as these add

thematic focus to our discussions, allowing us in this case to discuss future actions related to humor research (such as e.g. a future CC code-camp on humour generation, perhaps co-located with the annual summer school on Humor).

Overall, project communication between partners has been more than adequate, in large part due the increased number of opportunities for face-to-face interaction at CC-related international events. As in review periods 1 and 2, a substantial amount of preparatory decision-making has also been enabled by email communication between partners.

2. Goals and Deliverables, Year Three

With strong foundations laid in periods one and two, the past 12 months have included outreach to creative practitioners in the realm of digital arts, further educational outreach to future researchers in CC, and the creation of resources for the sustenance of the CC research community. The following deliverables were due in this period:

D1.6 *Report of Y3 Contact Forum*

D2.4 *Y3 mission report*

D3.5 *Y3 Outreach report*

D3.6 *Final report on schools and code-camps, all years*

D4.6 *Textbook on Computational Creativity*

D5.3 *Y3 Management Report*

With the exception of D5.3 (which is this document) we include here a short summary of each deliverable and its associated project goals in the following sections.

3. The Y3 Contact Forum

In coordination with the EC-funded WHIM project (which shares three partners with PROSECCO), the third annual contact forum was staged in London at Queen Mary University (the home of a fourth member, Geraint Wiggins) in April 2015. While the date of this event places it in the second review period, this event was indeed planned to be the third contact forum of the PROSECCO action in Year 3, and we thus consider it in this Y3 review.

The week-long forum was structured so as to facilitate public engagement as well as interaction with industry and creative practitioners. Moreover, the forum had at its heart the goal of bringing together different EC-funded projects on creativity in a single event. It thus brought together the members of ConCreTe, COINVENT, WHIM, PROSECCO and Lrn2Cre8. Tuesday the 7th and Wednesday the 8th of April were given over to cross-fertilization and sharing of project results, and provided an opportunity for the research associates and post-doctoral members of each project to showcase their contributions.

The most public-friendly event was held on Thursday, April 9th, with a roster of talks that combined researchers, practitioners and lay people. The schedule was as follows:

10:00 Opening of Event

10:15 Show, Tell, Imagine

11:00 Coffee

11:30 Show, Tell, Imagine

13:00 Lunch & Performance by Tom Richards
14:30 Short Talks by the Project Leaders
15:30 Questions and Public Discussion
16:00 Show, Tell, Imagine with Drinks Reception
17:30 Close of Event

The *Show, Tell and Imagine* exhibition showcased the following EC-funded research:

John Charnley, *FloWr*
Maria Teresa Llano, *The What If Machine*
Michael Cook, *ANGELINA*
Ping Xiao, *Stoorm Flow*
Hannu Toivonen, *Musicreatures*
Pedro Martins, *Photogrowth*
Amilcar Cardoso, *Visualizing Music with Swarms*
Pablo Gervás, *WASP: the Wishful Automatic Spanish Poet*
Pablo Gervás, *Propper: Generation of Narratives in the Folk Tale Domain*
Carlos León, *STella: a Story Generation Algorithm*
Tony Veale, *@MetaphorMagnet and Creative Web services*
Janez Kranjc & Nada Lavrač, *ConCreTeFlows*
Polona Tomašič & Martin Žnidaršič, *Automated Slogan Generation*
Vid Podpečan, *The What if Machine Robot Interface (WHIMBOT)*
Michael Cook, *To That Sect & A Puzzling Present Videogames*
Simon Colton, *The Painting Fool*

The final day of the week-long forum, Friday April 10th, was dedicated to a small academic conference on creativity at which technical papers were presented and members of other projects and the public were invited to listen and ask questions. More detail in this event is provided in deliverable **D1.6**.

4. The International Advisory Panel

PROSECCO encourages oversight from other members of the Computational Creativity community to ensure that its goals are addressed in a way that maximally benefits the community. The advisory board draws its members from the international community. At the end of Y1 the board comprised 4 international CC researchers, though in year 2 one of these members cycled out of the board and a new member, from Mexico, took his place.

The following 4 international researchers were selected by unanimous agreement at the initial PROSECCO kick-off meeting in April 2013:

- **Dan Ventura**, Brigham Young University, Utah, USA
- **Bipin Indurkha**, IIIT, Hyderabad, India (and, at present. Krakow, Poland)

- **Graeme Ritchie**, the University of Aberdeen, Scotland
- **Oliviero Stock**, Foundation Bruno Kessler (FBK), Trento, Italy

Bipin Indurkha has been of special value to the project, by lending a cognitivist perspective to the feedback we receive, and by organizing (for instance) a creativity evening at the 2013 PROSECCO Autumn School. In 2015, **Rafael Perez y Perez**, the current president of the ACC (Association for Computational Creativity) and respected story-generation researcher, was asked to join the advisory panel once Bipin Indurkha came to the end of his term. The board now has two members from Europe and two from the Americas, to offer a global perspective on the development of the CC field.

The feedback offered by the advisory board was compiled in the interim report of the board, which was submitted as deliverable D2.2 at the end of period 2. We have striven to follow the board's advice regarding the attainment of PROSECCO's goals, and have engaged in discussions with its members regarding these goals in a post-PROSECCO funding landscape. Indeed, this post-PROSECCO perspective has been our major focus of interaction with the board in the past 12 months. It helps in this regard that board member Rafael Perez y Perez is now the president of the Association for Computational Creativity (ACC) and is actively working to improve the ACC's public-facing image and academia-facing resources. Decisions must be made regarding the migration of PROSECCO properties to the auspices of the ACC. Key amongst these properties is the PROSECCO web-site, its educational resources and its online bibliography of CC publications. Discussions are on-going with board, though it seems likely that the PROSECCO site will cease to exist as a stand-alone hub and will instead be incorporated into the larger ACC framework. Since the ACC's charter was a Y1 deliverable for PROSECCO, this seems a fitting use of the PROSECCO resources.

5. Travel Missions in Y3

Travel missions in Year three continued to advance the PROSECCO goal of researcher mobility in Europe. As in previous years funds were used to facilitate individual travel missions between PROSECCO sites, and to facilitate broad attendance by young CC researchers at big-ticket events such as the second international code-camp and the CC tutorial that was held as part of the 2016 ICCS conference in Paris. In some cases, travel missions supported longer-term internships at PROSECCO sites. A case in point is that of Philip Wicke, a student from Osnabruck who visited the Dublin site (UCD) for several months to work on a CC project that yielded a valuable reusable resource (a mapping of English verbs to Emoji sequences, permitting e.g. the wholesale translation of computer-generated narratives into Emoji). This case illustrates the knock-on effects of PROSECCO funding, as Philip had earlier been an attendee at a **TEDx** event in Osnabruck at which Tony Veale (using PROSECCO funds) gave a talk on Computational Creativity. Our use of PROSECCO funds for public engagement thus facilitates PROSECCO's goal in fostering the next generation of the CC field.

In addition, travel funds were put to good use in bringing together PROSECCO partners and members of PROSECCO's advisory board. Finally, PROSECCO travel funds were frequently used to support travel to various conferences and workshops where PROSECCO partners gave keynotes and plenaries to promote the field of CC research. In all, funds were used to promote computational creativity amongst academics in other fields as well as young researchers in our own.

6. Outreach in Y3

Outreach efforts in Y3 comprised big-ticket events such as the second PROSECCO Code-Camp (see deliverable **D3.6**) and the week-long International Contact Forum in London (see deliverable **D1.6**), as well as smaller (and thus less expensive) efforts such as keynote talks, media interviews, targeted articles in relevant magazines, and events affiliated with the annual ICC (International Conference on Computational Creativity). Each of these efforts is described in detail in deliverable **D3.5**. We have continued to engage social media with the use of our Twitter account *@PROSECCOnetwork*. We have also created a new website that will continue to serve our needs post-PROSECCO, <http://BestOfBotWorlds.com>, and moved our PROSECCO blog to this new site (as users are slow to blog on a site that they feel has a limited lifespan). We have instituted a new policy regarding the use of live-blogging at PROSECCO (and post-PROSECCO code-camps), to ensure that the beneficiaries of PROSECCO outreach and funding contribute to the critical mass of CC material.

As detailed in **D3.5**, PROSECCO partners continued to be publically active in the third review period, as reflected in the number of media interviews and articles/programmes and keynote addresses that they have delivered. The principal educational outreach event in Y3 was the international code-camp held in Antwerp, Belgium in April 2016 (6th to 8th). The local chairs for this event were Lucas Nijs (of the Sint Lucas school of Art) and Walter Daelemans (leader of the *CLiPs* research group in the University of Antwerp), who also served as program co-chairs with PROSECCO coordinator Tony Veale. Participants were offered a scholarship to attend, capped at 750 euros per person and reimbursed on a receipted basis for travel, accommodation and meal costs. This represented a move away from our past approach to managing large events of this kind, for in the past it fell to the local organizer to provide accommodation and meals. In this case, however, participants were encouraged to find their own low-cost accommodation in Antwerp, to be reimbursed (up to the total cap of 750) *after* the event. Reimbursement claims were submitted by post to UCD in the weeks after the code-camp, and processed on a case-by-case basis. The University of Antwerp also retrospectively billed the coordinating partner, UCD, for costs incurred in room rental and catering *after* the camp was concluded. We believe that this model, which reduces the organizational load on the local organizer, is the best model for future events of this kind.

This event was unique in PROSECCO's short history, being the first big-ticket event to be locally organized by non-partners. This proved to be an important transition in the working of PROSECCO, for as we shift to a post-PROSECCO funding environment we will depend more and more on the good offices of willing collaborators from non-partner sites. We must make the case with these external partners that such events are more than PROSECCO events and can be of benefit to the broader community (as well as of particular benefit to the host institution and its local students in each case. Please see deliverable **D3.6** for a discussion of the future PROSECCO-style code-camps after the end of the project.

It is interesting to speculate on the accumulation of outreach effects in PROSECCO's lifetime. Partners have frequently been asked to deliver plenaries and keynotes in conferences and workshops of neighboring fields, and we have seen this as a positive reflection of the reach of CC ideas into those fields. The success of these interventions is not simply to be measured in the number of plenaries and keynotes, but in the changes these interventions can make in another field's perception of our topic. As a case in point, consider ICCBR, the *International conference on Case-Based Reasoning* (CBR). Though the emphasis in this field has shifted toward recommender systems, CBR researchers aim to solve future problems by drawing on the solutions of past problems. Insofar as this requires a patchwork assemblage of past solutions for new problems, CBR is an advocate of combinatorial and explora-

tory creativity. In 2014 ICCBR asked PROSECCO partner Tony Veale to deliver the keynote at its annual conference, and in the following year asked PROSECCO partner Pablo Gervás to organize a workshop on *Creativity and Creativity* at ICCBR-2015. Subsequently, in 2016 Pablo was asked to give the keynote lecture at ICCBR-2016 in Atlanta, Georgia. We can see in this conference a willingness to embrace CC ideas as promoted by PROSECCO, but we can also see the *stickiness* of these ideas. PROSECCO is achieving its goal of putting creativity onto the research agenda of fields other than our own, and is doing it in a way that preserves the integrity of our computational perspective on creativity.

Of course, the CC community also runs its own flagship conference, the annual ICC (International Conference on Computational Creativity) under the aegis of the ACC, whose charter was defined by PROSECCO in Y1. The ICC continues to be a prominent and obvious platform for the promotion of PROSECCO's goals for the CC field. Thus, in Y3 a one-day tutorial on Computational Creativity was organized at the 7th ICC, that is ICC-2016, which was held in Paris, France. The event provided an introductory overview to all those wanting to begin exploring the field, particularly students starting a research program in a CC-related topic. The program consisted of three introductory lectures:

Characterizing Computational Creativity, by Geraint A. Wiggins,

Data Mining and Machine Learning in Computational Creativity, by Hannu Toivonen

Assessing the Performance of a Creative System, by Graeme Ritchie.

The slides of the lectures have been made available at the PROSECCO project website.

Twenty three students registered online for the tutorial, with nineteen actually attending on the day. Eleven attendees were young researchers that received PROSECCO scholarship grants (given after a selection from 17 received applications). In the decision process, priority was given to European applicants and to those who had not previously received any funding from the project. All the attendees to the Tutorial were also registered in the main sessions of the conference and thus had the opportunity to immerse themselves in Computational Creativity research for the week-long duration of the conference.

7. The Journal of Computational Creativity

As noted in the previous management report, the PROSECCO committee believes it is still premature to consider the launch of a dedicated CC journal in the funded lifetime of the project. Our fear remains that an inchoate effort may not only fail to take hold, but damage the prospects of future attempts at a computational creativity journal. It has thus been agreed to suspend publication efforts until 2017 at the earliest, whereupon we will reconsider the viability of a new journal in an already crowded market space. Nonetheless, as reported earlier, we have set down a principled framework on which the journal will be published, and have done much of the groundwork to prepare the way for its later publication.

The PROSECCO consortium has agreed a framework for a *Journal of CC research* that allows for efficient management, minimal workload, sustainable operation, peer scrutiny, freedom of access and respect for ethical principles. The proposed journal publication scheme will also provide the Association for Computational Creativity (ACC) with an official regular publication that may become indexed by prestigious databases (e.g., SCOPUS, ISI).

The PROSECCO partners agreed the following principles for the operation of the journal:

1. The Journal of Computational Creativity (JCC) is an official publication of the Association for Computational Creativity (ACC), which will act as Publisher. It is published at least once an year and all the content made available online.

2. The purpose of JCC is to disseminate timely and informative articles that represent the current state of the art in Computational Creativity (CC) and to keep its readers posted on ACC-related matters. The articles are selected for appeal to readers engaged in research and applications across the broad spectrum of CC.
3. The mission of JCC is aligned with ACC in its purposes. JCC articulates its action with ICC3 to obtain synergies, namely in making joint publications, synchronizing reviewing plans, and sharing reviewing resources, articles and reviews.
4. The Journal adopts an Open Access policy. All material published is published under an Open Access License that allows unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited. The current proposal is to apply the Creative Commons Attribution (CC BY) license.
5. The Journal will be indexed by prestigious databases as soon as possible, and the bodies in charge will work towards attaining that goal in the minimum time.
6. The core contents of JCC will be peer-reviewed, and a description of the peer review process will be publicly available.
7. The Journal will be published on a regular basis, have an International Standard Serial Number (ISSN) as registered with the ISSN International Centre and have content that is relevant for and readable by an international audience².
8. The Journal will have a publicly available publication ethics and publication malpractice statement. The current proposal is to apply the ACM Code of Ethics and Professional Conduct.
9. All the Editors of JCC will have to adhere to the Code of Conduct and Best Practice Guidelines for Journal Editors proposed by the Committee on Publication Ethics (COPE).

It has also been agreed that the journal will be organized along the following lines:

1. **Volumes:** The Journal will be organized in yearly Volumes.
2. **Issues:** Until otherwise decided by the ACC, Volumes will *not* be organized in Issues.
3. **Regular Articles:** Regular articles will be published online sequentially and numbered sequentially starting at 1; Regular articles are published online as soon as they are considered ready by the Editorial Team.
4. **Regular Sections:** The Journal may have Regular Sections; Each Regular Section will be organized by an Editor; The Editorial Team will decide on the existence, organization and objectives of each Regular Session, and will nominate the respective Editor.
5. **Special Sections:** The Journal may have Special Sections; Each Special Section will be organized by one (or more) Guest Editor(s) and will comprise a collection of reviewed articles.; The Editorial Team will decide on the existence, organization and objectives of each Special Session, and will nominate the respective Guest Editor(s); Guest Editor(s) will organize a Guest Editorial Board, will publicize the Section, will manage and monitor the reviewing process and disseminate the results; The Guest Editorial Board will work on the reviewing and selection of articles to include in the Special Issue; Special Sections may consist, for example: i) of extended and updated versions of selected papers previously presented in ICC3; in these cases, it is expected that the PC Chair(s) of the conference will assume the role of Guest Editor(s); ii) of papers selected for a possible Journal Track in ICC3; in these cases, it is expected that the Chair(s) of the Journal Track will assume the role of Guest Editor(s); iii) of collections of selected papers on a relevant CC theme.

The following governance structures have also been agreed by PROSECCO partners:

1. Governing Bodies

- 1.1. The governing bodies of JCC will be the Editorial Team and the Editorial Board.
- 1.2. The Editorial Team (ET): a. Is composed by an Editor-in-Chief, who leads the team, and two or more Editors. The Editor-in-Chief is elected by the ACC. The Editors are nominated by the Editor-in-Chief. b. Will serve for a fixed term of 2 years.
- 1.3. The Editorial Board (EB): a. Is composed by ex-officio and non ex-officio members. b. All the sitting members of the ACC Steering Committee are ex-officio members of the Editorial Board. c. Non ex-officio members are nominated by the Editorial Team.

2. Responsibilities

2.1. Of the Editorial Team (ET):

- a. The production of the journal, including the management and monitoring of the processes of Reviewing, Publishing and Dissemination.
- b. Nominate non ex-officio members to the Editorial Board.
- c. Decide on the organization of Regular Sections and nominate Editors for them.
- d. Decide on the edition of Special Sections and nominate Guest Editors for them.
- e. Decide on the final acceptance of each article for publication.

2.2. Of the Editorial Board (EB):

- a. The reviewing of regular submissions
- b. Other editorial tasks proposed by the Editorial Team

As noted in our earlier report, is vital that when the journal *is* launched that it is launched effectively, and so the matter will be discussed again at the end of 2016, to determine whether the timing and the calendar is right for the launch of the journal. The field cannot afford mistakes with this effort, as a botched launch may alienate the very researchers we wish to attract to the CC community. Furthermore, at present the academic publishing calendar is already experiencing an embarrassment of riches regarding special issues on the theme of Computational Creativity.

8. Handbook of CC / Canonical Readings in Computational Creativity

A collected volume of CC papers, entitled Readings in Computational Creativity, is now under preparation with Springer, with publication planned for late 2016. All papers have undergone an internal review and editing process, and the volume is now in the final stages of preparation under the stewardship of PROSECCO partner **Amilcar Cardoso**.

Unlike other collected volumes of CC papers, Readings in CC will bring together revised and updated versions of older papers in CC that have proven their worth by laying the foundations of a distinct sub-area of Computational Creativity research. Taken as a whole, these papers will serve as a handbook of CC research that demonstrates both its scope and its methods. The full proposal was provided in deliverable **D4.3** at the end of year two. An updated version of D4.3 submitted in this period includes the finalized table of contents for the volume, which gathers together the following contributions from CC stalwarts:

Introduction: Systematizing Creativity: The Computational View

Tony Veale, Amilcar Cardoso, Rafael Perez y Perez

A Framework for the Description, Analysis and Comparison of Creative Systems

Geraint Wiggins

Evaluating Evaluation: Assessing Progress & Practices in Comp. Creativity Research

Anna Jordanous

From Conceptual “Mash-ups” to “Bad-ass” Blends

Tony Veale

Representing Social Common Sense Knowledge in MEXICA

Rafael Pérez y Pérez

Autonomous Intentionality in Computationally Creative Systems

Dan Ventura

Exploring Quantitative Evaluations of the Creativity of Automatic Poets

Pablo Gervás

The Nuts & Bolts of Concept Blending: Multi-Domain Concept Creation with Divago

Pedro Martins, Francisco Pereira, F. Amilcar Cardoso

Placing expectation at the centre of computational creativity evaluation

Kazjon Grace, Mary Lou Maher

Multi-Agent Based Models of Social Creativity

Rob Saunders

Bisociative Knowledge Discovery for Cross-domain Literature Mining

Nada Lavrac, Matjaž Juršič, Borut Sluban, Matic Perovšek, Tanja Urbancic, Bojan Cestnik

Creativity Versus the Perception of Creativity in Computational Systems

Simon Colton

Breaking the Mould, An Evolutionary Quest for Innovation Through Style Change

João Correia, Penousal Machado, Juan Romero, Pedro Martins, F. Amilcar Cardoso

Computer-supported and human-supported linguistic creativity

Lorenzo Gatti, Gozde Ozbal, Marco Guerini, Oliviero Stock, Carlo Strapparava

Creative Systems: a biological perspective,

Jon McCormack

The Evaluation of Creative Systems

Graeme Ritchie

Revisiting Design, Analogy, and Creativity

Ashok Goel

As is made clear in the introductory chapter written by the editors (Amilcar Cardoso and Tony Veale) and ACC president Rafael Perez y Perez, this volume represents a passing of the torch from PROSECCO to the ACC. The responsibility to nurture the CC research com-

munity will now pass from our coordination action to the international organization which was set up to promote the field and its work.

9. A Textbook for teaching Computational Creativity

A slew of keynotes and plenaries can only achieve so much, no matter how many we deliver. Our camps and tutorials can only reach so many students, and we must provide high-quality follow-up material if these interventions are to achieve an enduring effect on the field. For this reason a textbook in Computational Creativity has always been a key strand of the PROSECCO mission. When the web site is shuttered and its content migrated to the ACC website, this textbook will remain a principal PROSECCO legacy for the field of CC, allowing other educators to foster the next generation of CC researchers.

As noted in earlier management reports, the PROSECCO project has already produced one online introductory textbook called *Handmade By Machines?* that can be freely accessed in an engaging illustrated flipbook format from the PROSECCO website or from its own standalone site, <http://RobotComix.com>. This comprehensive book (of 200 illustrated pages and spanning all areas of CC) serves a neophyte audience and will continue to be supported after the end of the PROSECCO project. But the textbook as originally envisioned in the DoW targets a more sophisticated audience of college-level readers who are embarking on (or considering embarkation on) a research career in CC. We are thus working on a second textbook for this audience. Our proposal has been accepted by MIT Press, with the working title *Twitterbots and Thinker Toys: Making Machines That Make Meaning*. The accepted proposal, with feedback from MIT's anonymous reviewers as well as some sample chapters, comprise our Y3 deliverable **D4.5** (which is stored not as a single document but as a directory). The book is currently being written by **Tony Veale** and **Mike Cook**, with a planned publication date in 2017. While the DoW envisioned this book would be written by all seven partners working together, we have opted for a more targeted effort. Engaging textbooks with a coherent vision cannot be written by committee, or at least not written well in such a distributed fashion.

The focus of the textbook is resolutely practical, even if the notion of a Twitter “bot” will strike many as whimsical. Indeed, as the title and topic plainly suggest, the book represents a distillation of educational outreach efforts in PROSECCO's last two years. The first international code-camp focused on the design and implementation of creative Twitterbots, while the second focused on story-telling and narratology more generally, though in ways that are readily mapped onto story-generation bots. The substantial knowledge-bases created for both of these camps – the NOC list of famous people and the Scéalextric system of plot construction – provide an equally substantial foundation for the worked examples in the text book. Moreover, by packaging creative systems as Twitterbots, readers will learn to take full advantage of the social affordances of Twitter, so that their systems are public-facing and fully archived; every single one of a system's outputs will be preserved by Twitter for posterity, and new outputs will be served up to willing followers as they are created. Though the focus on Twitterbots necessarily reduces the scope of the textbook – so that e.g. linguistic applications of CC are emphasized over visual and musical – this is a necessary tightening of focus if the book is to present a coherent taster menu for CC and not a free-for-all buffet. After all, the field need not restrict itself to a single canonical textbook, and the success of an initial offering that presents CC as a fun, hands-on yet philosophically rich endeavor will pave the way for future textbooks that focus on other modalities of creativity.

10. Web-Site, GitHub and a new Blog

The PROSECCO website has evolved over the past three years from an initial rough-and-ready homemade effort to a professional project site to a hub for computational creativity research. The latter transition was effected in line with reviewer comments from the Y1 review. Sadly, the fate of project sites is rarely a long-term flowering of activity, even when the site is repurposed as a hub for the entire community rather than an official cabinet for project-related materials. Few users want to frequent a blog that is tied so closely to a specific project – blogging on such a site feels too much like working for someone else, *for free* – while international users too easily dismiss a European project site as a regional resource.

In line with the Y2 reviewer comments, we have explored new possibilities for the PROSECCO blog. The first action removes the explicit PROSECCO branding and the obvious ties to the PROSECCO project (though the PROSECCO logo and brand are included in a more subtle form). We have migrated the blog to its own website, <http://BestOfBotWords.com> and adopted a policy whereby participants at PROSECCO (and post-PROSECCO) code-camps and similar events are required to *live blog* about their development efforts. The new website also preserves many of PROSECCO's original functions as a community hub, providing links to online resources, events and to the discussion of relevant topics. Gone is the sense that the site and the blog are the property of a small group of dusty academics.

We have also created a PROSECCO *GitHub* – easily accessed via the new blog site – to store the comprehensive resources created for the PROSECCO code-camps (e.g. the NOC list of famous people and the Scéalextric system of plot construction) with README files on their use. The GitHub can be accessed here: <https://github.com/proseconetwork/> This site preserves the PROSECCO brand but is designed to outlive both the project and its official website. The Github and the blog are key components of our post-PROSECCO strategy: both will be promoted by the upcoming textbook from MIT Press and each provides an integral service to future readers of the book. We shall continue to promote these resources as they become available on the PROSECCO Twitter account [@PROSECCOnetwork](https://twitter.com/PROSECCOnetwork), which will remain active after the end of the project. We have also transitioned our PROSECCO forum to be a more general Forum on Computational Creativity via Google Groups:

https://groups.google.com/forum/?utm_medium=email&utm_source=footer#!forum/computational-creativity-forum

In addition to the usual (and very useful) posts offering PhD positions and bursaries in CC, recent topics on the forum that have fostered substantial discussions include *Teaching computational creativity* (an open discussion that solicits and shares views on best practices in the teaching of CC), and *Seeking advice for undergraduate(s) with ambition for computational creativity*.

11. Concluding Remarks about the PROSECCO Years

It may seem that recent activities in Y3 to consolidate the legacy of the PROSECCO project effectively make PROSECCO itself an invisible entity, soon to be forgotten once the project and its funding ends. During its lifetime, PROSECCO was most useful when it was most visible to the CC community, but now that we must transition to a post-PROSECCO world, the project's legacy is best served by the quiet absorption of its resources and mission into the international organization ACC (Association for Computational Creativity) which, though existing informally and without a charter prior to PROSECCO, is itself a cornerstone of the PROSECCO legacy. Einstein once said that “originality” is the art of hiding one's sources,

and PROSECCO's efforts will continue to be a vibrant, if hidden, source in many future activities of the CC community.

Though certain goals have been delayed until after the project ends – chief amongst them the launch of a dedicated *Journal of Computational Creativity Research* – we feel that the PROSECCO consortium has achieved its stated goals in nurturing the field of CC in ways that could not have been achieved in such a short time without EC funding. The ICC3 conference is in rude health, growing in the numbers of attendees from year to year, in part due to the influence of PROSECCO and its sponsorship of co-located events such as tutorials and feeder events such as code camps. The ACC has been placed on an assured footing, and is now strengthening its mission to capitalize on PROSECCO's formative efforts. We have produced a wealth of reusable educational resources, including lecture materials and video lectures, to say nothing of two different textbooks. Most of all, we have produced research materials that would be the envy of any EC-funded research project. These comprehensive knowledge-bases will continue to support our efforts in educating new CC researchers (via e.g. the textbook and future code-camps, as well as bespoke CC courses in geographically diverse institutions) and even support original CC research, by filling the gap so often inadequately filled by ConceptNet, WordNet or noisy web-extracted data. The field of CC will continue to owe a debt of thanks to the PROSECCO project just as we, the PROSECCO consortium, owe a similar debt to the EC for funding our efforts and supporting our vision for the field.