

2012 國際科技藝術展
International Techno Art Exhibition

TEA

集體智慧 COLLECTIVE WISDOM

文化部
Ministry of Culture

國立台灣美術館
National Taiwan Museum of Fine Arts

TEA

集體 COLLECTIVE
智慧 WISDOM

科技 娛樂 藝術 Technology Entertainment Art

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集體智慧－2012國際科技藝術展

TEA / COLLECTIVE WISDOM
－ 2012 International Techno Art Exhibition

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國立台灣美術館 A1 展覽室
Gallery A1, National Taiwan Museum of Fine Arts

策展人 Curators

林 書民	Shu-Min Lin
傑弗瑞·史塔克	Gerfried Stocker
曼努艾拉·納弗	Manuela Naveau

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Preface

1

序言

黃才郎
Tsai-Lang Huang

序

黃才郎

國立台灣美術館 館長

網際網路在1960年代末期出現，迄今已有半世紀左右的歷史。這項堪稱人類史上最偉大的發明之一，徹底改變了我們的思惟與生活方式；其中尤為重要者，是網路世界中開放的發言權，讓每個人都能充分表達自我想法與意見，並在短時間內累積為集體力量，成為左右事件發展的關鍵。2011年3月發生的日本大地震與海嘯，在震災過程中，網友們透過Facebook、Twitter、Plurk等不斷發送各種警報、求救、避難、安全等訊息，使整個日本及國際社會能在短時間內獲得最新資訊，亦令人見識網路驚人的傳播與群體效應，甚至能成為救難的工具。網際網路與社交軟體的應用，使「集體」所興起的輿論或共同創造的行為，成為當代社會中最不容小覷的力量。

現今網際網路及社群媒體的廣為運用，改變了公共議題的討論模式，亦形成特殊的當代文化現象。許多社會輿論的產生與共識形成，不再只透過新聞媒體的報導；網路群體的討論，反而更容易引起話題，甚至成為媒體報導的依據。而藝術家也意識到集體參與與個人創作的相互影響，其中，數位藝術可透過數位媒材與網路之應用，使眾人成為藝術創作及其發表過程中的一份子，作品不再透過創作者的主觀產生結果，任何一個人的參與即足以改變藝術品的形貌。可知「集體智慧」不僅存在於社會的運作方式，也存在於藝術的創作過程中。

自今（2012）年起，本館為推動數位科技與視覺藝術的跨界合作，展開「數位科技與視覺藝術共構發展計畫」，旨在從當代文化議題與社會現象的討論中，誘發數位科技與視覺藝術更深層的交融，以產生互相提升的槓桿效應，而「集體智慧—2012國際科技藝術展」即為本年度的重點工作。本展以「科技」、「娛樂」、「藝術」為核心概念形成英文展名“TEA”一詞的縮寫，點出匯集眾人所形成的集體智慧，恰如茶香般具有渲染與擴散力，也為網路社會的特殊性下了最佳註解。展覽精選國際數位藝術精采作品，分為「社群精神」、「翻越旅行」、「智慧合作社」、「解構—建構之間」四項主題，探討數位藝術創作與科技及社會環境的關連性。本展的順利舉辦，謹向三位策展人林書民、Gerfried Stocker及Manuela Naveau之辛勞致上敬意，期待藉由展覽的呈現，能讓民眾瞭解個人力量之重要性，更能在虛擬網路之外積極參與真實世界的討論。

Preface

Tsai-Lang Huang

Director of the National Taiwan Museum of Fine Arts

The internet came about at the end of the 1960's, and this half-a-century-old invention is considered one of the greatest in human history. The internet has completely altered the way we think and live; more importantly, the freedom of speech in the cyber world has allowed people to fully express their ideas and thoughts and to form collective forces for critical actions in a short span of time. During the earthquake and tsunami disaster in Japan, March 2011 we witnessed numerous warnings and messages of help, shelter, and safety spreading on Facebook, Twitter, Plurk and other social media which provided the latest information for Japan and the global community. It demonstrated that remarkable communication and group effects made possible via the internet and could serve as a tool for rescue operations. The internet and social media have given rise to “collective” public opinions and co-creation, making a powerful force in the contemporary society.

The widespread use of internet and social media has altered the way public issues are discussed and has spawned a unique contemporary cultural phenomenon. Public opinions and social consensuses are no longer reported by the news press only. Online discussions are more accessible; some have even become sources which media reports are based upon. Artists have also realized the interacting impacts between collective participation and individual creation; in digital art, through applying digital media and the internet, any individual holds the potential to alter how a particular artwork turns out in the end. “Collective Wisdom” not only lies in how the society operates but also in artistic creative processes.

Since this year (2012), our museum has embarked on the “Digital Technology and Visual Arts Collaborative Project” with cross-disciplinary collaborations. The mission of the project is to incite profound integrations of digital technology and visual art by discussions of contemporary cultural and social issues and to create a win-win leverage effect. “TEA/Collective Wisdom—2012 International Techno Art Exhibition” is a key focus for us this year, with the exhibition title TEA based on the acronym of the three core elements, “Technology”, “Entertainment”, and “Art.” The spreading and lasting of aroma of good tea is symbolic of the power of collective wisdom and also makes an ingenious remark for the special online world. The exhibition features many exciting international digital artworks, and is divided into four themes: “Socialize or Die (Dive)!” , “Hyper Trip”, “Wisdom Association”, and “Inter-struction”, which are based on the connections between digital art, technology, and social issues. The success of this exhibition is made possible by the three dedicated curators, Shu-Min Lin, Gerfried Stocker, and Manuela Naveau. Immense gratitude goes to them for their efforts. We hope through the exhibition to offer an opportunity for the public to realize the importance of the power-of-one and to encourage people to actively partake in discussions beyond the cyber world to prompt for tangible actions in the real world.

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Curatorial Discourses & Essay

策展論述 及專文

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傑弗瑞·史塔克 Gerfried Stocker
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TEA 一宣言

林書民

本展以TEA——集體智慧（Collective Wisdom）為主題，探討社群媒體時代除了訊息傳遞方式與創意的轉變，也讓藝術的參與者從個人擴增到群體甚至於虛擬單位，並且透過大眾的不斷參與，集結眾人智慧，讓藝術成為組織與行動的方式或過程。

科技與娛樂的大量結合，可由互動多媒體藝術發展的脈絡來一窺究竟：最早由參數固定的被動式互動展出模式，引領新媒體裝置藝術成為一股潮流後，憑藉著更繁複的軟體程式，以及 2006 年Web 2.0（user generated content, UGC）這個讓使用者也可以自由創作內容的重大變革，造就了每個人都可以成為創作者（藝術家），也同時逐漸發展為即時性互動模式；且由藝術展覽領航，快速發展到各國際大型商業展覽，甚至成為博覽會展的主流展示語言。但由於高科技存在的門檻，這個階段藝術仍隱藏著菁英色彩，因為科技的高低差距，完全影響到作品最終的完成度；一直到 2009 年後以個人為單位的社群網絡竄起，這個世代開始了在多元參數微變化互動世界裡的思考與行動，並且快速地成為慣性，參與（創作）的大眾突然如雨後春筍般越來越多，遍地開花。

在網路隨機微動的小世界裡，偶然或是契機性連結非常神奇，在世界平串後人際關係微妙的世界脈絡中，有許多非常重要的網站扮演核心角色，巧妙地讓世界微縮，而且有秩序地分類整合貼近迎合每個人的特殊偏好與需求。網路空間如同集體幻覺所撐起的大網，多層羅織。而當支撐這種連結模式的龐大社群力量運用到藝術介面，則產生了藝術界前所未有的草根性蔓延擴張力量。除了打破藝術參與原有的高藩籬，在聯結過程中所產生的新模式，恰巧也回歸到藝術原創的本質，藝術不再只是技藝訓練的成果，而是將潛藏行為的繁複性發揮得更淋漓盡致。我們反觀藝術的字源及本質含義，除了技術、工藝、科技之外，也意味著經歷過程的方式、管道，或人們因而聯結的模式。歷來每個世代的藝術、新藝種都試圖在打破某種結構化的過程中找到新出口，而社群媒體的偶然性聯結非常奇妙地開創新模式，同時也集結強大的創意性力量，型塑這個世代人類集體智慧與藝術結晶。

網路價值因為聯結數量不斷地增加而大幅提高，各種平台不斷增多並共享串聯，交互造就刺激出至今人類史上最多人數共同參與的創作規格。藝術的互動模式，藉著意外機遇隨機出現，人們共同建構組織、聚在一起社交、合作、甚至將他人構想集結改良，來達成個人能力不可能達成之目標，共同完成創作。從心理層面來看，人類潛意識如同處於不同位置的井，地底深處卻共用著同源脈流的地下水。潛意識的作用發揮讓我們能互相協調，影響並產生共鳴，因而我們本能上具有同理與利他的能力；而經過人類長時間演化，我們的神經反應已經能自動反映周遭人們的感受、經驗與行為並共鳴共振。或許科技發展並沒有讓我們擁有更多的生物能力，但社群網絡則如同潛意識脈絡的延長線，讓我們有機會將更多的集體經驗與集體記憶串流連結在一起；同時可以解析人類行為背後的

動機脈絡，自然界與人為創造的世界，從細胞分子到網際網路上的伺服器等，可以對照網路在成形的過程中如同宇宙縮影，或是觀照對應身體的小宇宙。在網路世界裡，念頭的起落、聚合與消失、接收與發送之間，恰如同易經卜相，以有形練其無形，以無形生其有形，處處充滿契機；心識與宇宙的空間學，實體與虛擬，如同太極的陰陽兩極，在往來的互動中透視其機。網路構成了新造神運動，或是緣分製造機？創造意外收穫的情緣發生在每一瞬間，總在不經意地互動過程中，世界成為我們自我潛意識的縮影，我們所點擊的，其實便是我們鏡照的自己。

早期大眾傳播模式上具有獨佔單向性，架構上存在層級。如今的網路世界則比較民主，從另一個角度看，像是資本主義世界裡卻以虛擬模式充分運用了共產的工具。各種媒材媒體之間有著微妙的不同，但無法相互取代。當今媒體超市裡，貨架上琳琅滿目的產品特質提供滿足各種心理需求；而社群媒體宛如進行中的調色盤，經常出其不意地大放異彩。如果我們問最終社群媒體能否在藝術史上有一席之地？仍有待時間驗證。但肯定將是一個跨越當下心理、社會、空間距離的分水嶺，且廣泛影響當今新紀元的每一個人。

TEA = Technology 科技 + Entertainment 娛樂 + Art 藝術

以科技的界面來看，PC、Web 2.0、Social Media、App、Web App.....等，這些是科技藝術很重要的貢獻，讓人類溝通的交流介面突破原始的時空限制，上達雲端，是為科技藝術發展分水嶺。而藝術平台多元化後，藉由許多工具，如網路資源共享、線上虛擬世界，及社群媒體等……，為具創造性的文化活動開拓出無遠弗屆的分享平台，讓聚光燈從菁英階層轉移到群眾的集體開創性。在進展快速、資訊亂竄、充滿金融危機沉悶的大時代裡，大家都需要些娛樂作為情緒出口，化解抑鬱的不定性。此時，新科技發展改變人類文化的產出方式，而經由娛樂的模式傳遞文化內容，將會是下一世代認識、經驗，與吸收文化的主要媒介與途徑之一。

蘊含上述特質，TEA 藉由改變作品的成分以及分解速度，建構新品種的混種DNA，揉合時代脈動，讓作品轉變成一種新的速度及韻律，與群眾隨時以細微的人為參數互動。當世界拉平之後，我們所重視的不再是地理空間的不同，而是一種平行時間上的契機吻合。傳統傳媒退位，而以特定主題為核心的社群則自動連接成了小團體，密織成為隱性的新國度，如同生物細胞結構間的關係，我們與其他任何人都是許多緊密連接的小世界，藉由連結度高於過去的世代而快速進化。契機與不斷繁殖的再生性，隨時改變結果的排列組合，成為藝術創作的新生力軍；而在這個奇特國度裡，大量訊息經常會讓人困惑而不知所措，但也因同時充滿了微動、微參數的改變影響，而隨機式地產生不預期的精彩。恰如許多APP軟體中，經由隨手搖晃手機而與他人聯絡；網路上這種反覆出現的力學，

主宰了隨時出現下個不可預知的路徑與奇遇，如同反映人類本質情感不單一的特質，網路上的群眾多少也生活在多選項的不忠誠循環中，對許多人來說，因時間有限，或許最重要的不是擁有更多的連結，而是篩選擁有正確的連結。社群網路作品正值萌芽之際，是否如同各種流行突然爆發後又迅速退燒？這泡茶將會有多少餘韻，目前尚難定論。但作品的選取，首先即需要考慮到歷史價值、提出多少新觀點，或是模式；而關於作品未來的抗衰老性，則考驗著作品將來是否還能採納進更多未來的時代元素。

TEA—集體智慧（Collective Wisdom），展覽內容將就下列四大面向展開：

I. 社群精神 Socialize or Die (Dive)!

驅策著社群媒體不停發展的原因，實則根源於人類社交／創造關係的慾望，「社群／交關係（social）」與「科技媒體（media）」兩項因素交互相乘，創造出越來越大的影響力，更多元的對話關係因此被創造出來。現代社會高昂的社群精神，不僅表現在社交網路及社群媒體上，科技與網路之外的工具及媒介，更是豐富了各種線上社交圈的可能性。人類社會將會越來越接近網路式，而建構出美麗與新秩序嗎？而最終究竟是創新導向網路社會，還是網路社會促進創新？無論如何，社群精神無庸是一種多方位且多元的交流、匯流與循環。

〈推特心情快照〉（Twistori），顯現社群媒體裡流動的情緒鏡照百態。現代社會其實就是遠古部落社會的翻版，由於快節奏的生活、眼花撩亂的資訊而逐漸流失內心安穩的現代人，為了維持內心安定的自我平衡，而使用網絡連結來呼朋引伴，相互取暖。漸漸地這個連結同伴意識的世界，創出了許多安撫情緒心理的溫床，鏈結這些小組組織便組合成了整體虛擬社會。城市是這種虛擬連結的巨大平台，承載著眾多小小心聲；這些聚集而成的脈絡，交錯共鳴後很容易串流集結成強大的集體意識，啟發群眾自我投射，甚而引發自我認同與交流。推特用戶平常喃喃自語時，並沒有針對特定對象發聲，可是當個人的自言與另一人的自語產生了時間上的交集時，就會產生另一種共同價值。當觀眾開始進入〈推特心情快照〉時，將生活中隱密壓抑的心語，以敲擊鍵盤抒發內心文字的方式呈現出來，為這些阻塞在心的詞語找到出口。而透過此交流機制，將自我心情寄託於有形符碼及未知對象的同時，我們也正在撰寫一部自我對話的心靈紀實。探討心理層面的參與，另一件作品〈剪影留言板〉（Shadowgram），則在視覺上更進一層面。觀眾將自己的身影經由拍照、現場印成剪影貼紙、將剪影貼紙與對話貼紙黏在一張「地圖」上的過程中，完成參與作品的存在感，這個圖像化的討論系統便可成為全民參與式的腦力激盪。而當越來越多的貼紙被貼上地圖時，現場真實與虛擬的交界處，便產生越來越多的變化性。探討存

在的自我肯定感，作品〈大家好!〉（Hello World! or: How I Learned to Stop Listening and Love the Noise），蒐集大眾自發性錄製的個人影片，這些小小的私密性片段以馬賽克方式拼貼成一大投影牆面時，呈現窺視與被窺視的集體交鋒。綜觀整體網路現況與趨勢，會發現網路上不斷出現飆流行現象，小人物藉此平台異軍突起、一朝成名，任何人都有機會站上面對全世界的舞台。個人的存在，並不只是確定自我價值這麼單純而已，而是從微妙的關係集合體中所產生的一種秘密聯結，結合成一種累積點擊數、按讚數量等所建構起的聲望與自我肯定。作品的拼貼突破了時間的線性軸，創造想像空間，運用科技媒介讓身處異地的人們在虛擬平台裡交會，讓人得以在資訊瞬息萬變、充滿動態與可能性的世界裡穿梭。在虛擬世界裡所建構的多元個性，也無限滿足及安撫了個人潛意識裡各種需要宣洩的情緒，讓許多人的壓抑得到舒展，進而變成一種精神性的集體治療。窺視與被窺視，或者說觀賞區及表演者舞台區的界定，全看當下念頭選擇站在哪一側，希望呈現給所有人的樣貌。

當作品所演繹的集體智慧，由人為單位延伸到物體，利用目前科技的全球衛星定位系統以及行動電話，在麻省理工學院感應型城市實驗室的兩件創作中可見其發揮得盡致。〈回收追蹤計畫〉（Forage Tracking）以增加非官方體制資源回收組織的能見度為主要訴求，讓大眾深刻認知此組織對城市所貢獻的服務，並藉以發掘有效回收路徑，建立「資源回收者」與「資源需回收者」之間的新合作關係。整體計畫所作出的供需關係分析與貢獻未來，亦可對應到資本需求之本質面上，實質的又貢獻回現實社會。〈垃圾追蹤計畫〉（Trash Track）企圖從結果中尋找更有效率的廢棄物運輸方式，將二氧化碳排放量降至最低；而城市也能利用這些資訊，勸導市民做出更利於地球永續的消費決定，鼓勵加強資源回收，或正確處理有害廢棄物，讓觀眾看到隱於城市表面下的樞紐脈絡，是一個存在於我們生活裡的另一層平行空間。

II. 翻越旅行 Hyper Trip

網際網路的便利發達，影響了人規劃生活圓餅圖的比例，花在網路上的時間越多，留在現實世界裡的時間就越少。虛擬資訊的流通與人際互動早已混搭成許多人真實生活的一部分，翻轉虛擬與現實的經緯，體驗一場遊走於網線上下、虛實之間的新形態旅行。而與社群網絡連結的強弱與多寡也攸關我們的情緒健康，在實體世界或是網絡世界都缺少連結的人們，有時會感覺到情緒低落或是離群索居的孤單，而實體與虛擬世界裡，連結的出現與消失之間產生的落差，醞釀出作品的戲劇性與想像力。

作品〈尋找古德巴先生〉（Buscando al Sr. Goodbar; Looking for Mr. Goodbar）透過YouTube所錄製的片段生活畫面，藉由旅程將地理位置串聯之後，再依循真實的旅程重新走入虛擬紀錄。地理背景不變的情況下，重新錄製了時

間的軌道，最終呈現在美術館內的則是壓縮了時間與空間的成品。透過此作，藝術家提出對於當代都市語境下，人際社會和媒體網路的交互作用的反思和探討。傳統的共同體，是建立在地理位置的連接上；現在世界變得更小，但透過網路連結，我們的機會卻變得更大。因為如今我們所重視的價值，是時間的臨場性；而歷史像是一種集體幻覺，過去攝影機是我們視力的延伸，相片如同記憶的保證書，但在我們這一代因為科技可以再製或修改影像，甚至製造了更多假象的歷史。假若古今所有正確或重要的智慧都被保存與珍惜，那麼錯誤的資訊、謊言將也可能有重新被檢視的待遇。〈尋找古德巴先生〉讓觀眾介入剪接虛擬與真實的時空。

III. 智慧合作社 Wisdom Association

一個人擁有的社群網絡連結若是不夠多，便難以從不同文化界面甚至相距遙遠的世界另一端獲得資訊，只能侷限於唾手可得的較狹隘的觀點。網際網路讓資訊整合與交換，得以跨越時區與空間的限制，讓集體智慧的鏈結不論在經濟或知識文化的傳遞上，快速地產生可觀的群體效益。倘若轉變作品的文化開始變得興盛，那麼也意味著群眾的改造慾望增強並成為趨勢，於是作品很快就會被網友給分解。這些連續改變中或是進行中的作品，集結成共同體的新意義。

美國藝術家亞倫·科柏林所創作的〈一萬美分〉（Ten Thousand Cents）與〈綿羊市場〉（The Sheep Market）兩件作品中，藝術家透過亞馬遜人端運算平台，以群眾外包的方式，集結眾人的勞力來完成作品。它的概念是將一些需仰賴人力完成的工作，透過特定平台，外包給網路上無特定的自願者；而工作內容通常具有較瑣碎、大量人力需求、電腦程式難以取代之特性，卻也同時充滿了手工藝與藝術的趣味。其運作方式是由委託工作者將原本性質單純、工作量龐大且耗時的任務，切割成相對細小而瑣碎的工作，並且以按件計酬的方式，直接在網路上號召大量有意願的群眾參與。由自願參與者所組成的特定群眾的產出，最後成為作品裡面互相不可或缺的一部分。反觀我們身處的科技狂飛進步的後台，每一個方便使用的完成科技，背後都有著一套綿密的代工系統。許多作業線上的勞工，每日工作如同螺絲般，僅分配到視野狹隘的裝配工作；但是他們的努力與產出，造就了我們人手一機或是更多現代工具所造就的連線，連結出了更寬廣的世界俯瞰圖。

〈日常片刻〉（Exquisite Clock）藉著讓世界各個角落的匿名大眾，透過網站與APP應用而產生相互連結，鼓勵人們用心感受生活片刻，集眾人之力，使報時畫面充滿圖像的視覺趣味，也模糊了藝術家、創作者、生產者與消費者間之身分界線，並在保有原物的固有性與記憶的同時，在組合中重新設計了作品。由互動藝術的時興可以

看出，現代人似乎已經被馴養成一種一旦接受到刺激，就會作出反應的個體，〈漫畫接力〉（Ideogenetic Machine）作品因觀眾的持續加入，不斷有機增生嶄新故事與影像版面，且漫畫中的畫面不會重複。這件作品的軟體同時在漫畫情節版面中提供空白對話框，可供觀眾日後填入自己創造的對白，於是一本透過觀眾參與而自行衍生發展的漫畫於焉誕生。〈你也來一筆〉（Swarm Sketch）的觀眾既是創作者也是裁判，在每一次判別區分畫面之時，觀眾都受到當時已建構成主觀的好惡所左右，主導畫面的進退濃淡生滅，而動畫藉由一次又一次不斷地繁殖，也就是一個接著一個不停增生幻化的圖面中，來獲得作品本身的永恆延續。

什麼是人類與電腦間的關係？開放原始碼是否是可持續運作創意社群的方式？我們要如何找到在這之中人工與有機體的分界線？我們進入了一個無法忽視個體意識所形成的多數利益的時代，沒有什麼設計一開始就是完美無缺的，如同社群網路的集體參與後產生的變數特質，設計必須要能適應往後的改良需求，允許在原架構上進行再設計，這樣才能產生真正有機的完美好設計。在這些數位創作中，是否含有我們在自然世界中所知的微妙與細緻？這些議題都是藝術家德雷弗斯在〈電子羊〉（Electric Sheep）所關注且探討之方向，運用有機與共生繁衍，成為集體參與後不斷變化的作品成果。

作品〈台灣金〉（Taiwan Gold）在本次展出所提出的模式，以「尋找台灣色彩計畫」之前所未有的草根性蔓延力量，將潛藏的行為與記憶意識多樣性藉由群眾發揮，集結全台灣極致深度與廣度的集體記憶與意識，號召全民集體智慧，尋找代表色彩展現台灣之美，進而讓作品參與者、觀眾等均能由此發現台灣文化深厚底蘊。顏色成為一種記憶的溫度，在重要時節扮演不可或缺的角色，同時代表生命禮俗之美的台灣色彩——「台灣金」，是屬於台灣人那段發光的金色記憶。在這些共同記憶、生活經驗與生命感動中，納眾人智慧的集合函數，尋找集結眾人之「金」，將於本展結束後總和平均找到集體智慧共創之「台灣金」。觀眾自發性上傳自己搜集的成果，將成為可以共享的資源，集結共同智慧所產生的畫面。在隨時變動中也刺激其他參與者的聯想，這種厚實、強烈且完全不可預測的視覺特性，將會造成更多的相互激勵。意外的收穫幾乎都源自於面對面的互動，如果我們能培養豐富的連結，抱持開放的心態，人生會有更多驚喜與不可預期的幸運機遇。開放的資源打開了新的創作模型，將有更廣泛的運用，除了共同創作之外，我們也進入一個共享創意的時代。

IV. 解構 ←→ 建構之間 Inter - struction

虛擬空間中變換不定的主體和社群，在鬆動固有社會關係的同時，又能透過有機解構的過程中建構起新的可能性與鏈結，呈現現實與虛擬世界之間的權力消長；所牽引出的隱性社群聯結關係，再探討至社群媒體的未來展望，好似群體一起拆解與搭造積木，解構同時也持續建構中，大眾文化的次文化也會誕生出超越原本設計與意圖的新層次。

網路之所以重要，不是因為它創造了新的世界，而是因為網路是一個舊世界秩序更深度的延伸。於此主軸下的兩件作品，敏感地探討並觸碰到了隱私權的議題：〈面對臉書〉（**Face to Facebook**）與〈盯著電腦的人們〉（**People Staring at Computers**）。此藝術計畫與其後續的議題發酵，揭示了公共空間與私人隱私的隱晦分野與問題，隱私權正因科技產生了質化的變革。這個改變以超乎想像的方式和速度，如同一股暗流般影響我們的生活，而我們卻還抓不準該怎麼規範，抑或如何用明確的社會與法律字眼為改變中的權利劃清界線：數位社會已經穩定漸進地發展，但法律仍處待開發的草創階段，我們似乎只能隨著時代與科技的前進，追趕制定新的遊戲規則。而對大部分人而言，科技是陌生且令人恐慌的，更重要的是，科技進展所帶來的當代隱私問題已與過往大不相同，依賴個別案例累積成文規範的法律，不僅耗時耗工，面對隱私因科技發生的繁瑣細節，時間非但彈性不足，因應變化更是緩不濟急。而且，隱私是相當私密的議題，換言之，每個人願意為某些利益而放棄隱私的程度並不相同；另一方面，大部分社會上倡導的新法律、科技或實際見解，往往在引導人們集體隱瞞事實。因而隱私與相對的社會價值或法律權利之間的妥協，多半因個別情況而有所不同。當某人聲稱他的隱私遭到侵害的同時，通常存在著與隱私權相對立衝突的其他利益。因此，明白哪些其他利益可能踐踏隱私權，其實與理解法律上的隱私權同等重要。

作品〈匯跳〉（**Rate Beat**）使用電磁鐵讓瓶子內的錢幣跳動，並與網路上的匯率做即時線上連結，探討資訊透明化及視覺化的時代。作品背後延伸的網絡經濟所構成的龐大網路，使得一些幸運或是較富創意的個人，得以獲得前所未有的財富；但財富的來源並非組織，而是經由連結，並且未直接涉及金錢交易，而是各種免費服務的交換。在這種新形式的資本主義裡，競爭的成分並未消失或減緩，而是轉換成另外的脈絡，當我們更深入探討網路，會發現網路其實反映了現代社會中各種不同的重要層面。

TEA的核心價值，是透過社會互動的方式傳遞供互動的訊息或是信念，如同TEA的文字表面含義，藉由類似香味擴散的方式，沒有圍牆界線地運用社群媒體蔓延擴展。TEA的理念，將成為一種新的生活時尚，如同茶在東方文化生活中不可或缺的地位；TEA的運動，揉納網絡與社群，將如同好茶在加熱中慢慢unfolding散開影響力，創造議題，同時生產意見領袖，科技、娛樂與藝術三元素合一，色香味俱全。TEA 1st 以「集體智慧」製茶，採集時代的趨勢與洞見，打破過去的想法，注入新的能量，設計成單向與雙向並進的對話方式，產生新的親疏關係，創造一種新的訊息，並以流動的方式匯集與分享，讓好茶不斷回沖，讓TEA的概念延伸成為一種新運動，標誌時代的一則宣言。

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Declaration of TEA

Shu-Min Lin

The theme of this exhibition is “TEA / Collective Wisdom,” and it intends to explore in the era of social media, besides creative shifts in the way messages are delivered, how participants of art have expanded from individuals to collectives and even to virtual units. With continuous public participations, it also looks into how the collective wisdom can make art to become communal and action-based.

The mass-integration of technology and entertainment could be viewed from the developmental context of interactive multimedia art: having emerged from the passive interactive approach with set data, new media installation art has taken off and turned into a new sensation. With the invention of more complex software and the launch of Web 2.0 (user generated content, UGC) in 2006, the revolutions create the possibility for anyone to become an artist, and at the same time, instantaneous interactions are made possible. Pioneered by art exhibitions, this phenomenon has quickly spread to other grand-scale international commercial exhibitions and has even become a mainstream exhibition lingo used in expositions. However, with the technological threshold, there exists an elitist sense with this art genre because the difference between low and high technologies has critical impacts on the level of completion for the artwork. Since 2009, social media based on individuals has begun to boom, and that thought-processes and actions are exchanged in an interactive realm became customary. We began to see a bountiful emergence with people taking part in making creative works.

In the random world of the cyber space, some haphazard connections are quite fantastic. Within this delicate microcosm of social relations, many popular portal sites have abridged the distance between people and the world. The cyberspace is like a collective illusion. When these mighty social groups comprised of weak links are utilized for artistic purposes, a force is formed that takes root in an unprecedented way and breaks all overwhelming barriers that art once held. Throughout the connecting process, new models are formed, and the hidden complexness in human behaviors thereby is able to be expressed to its fullest potential. As we look back on the word origin for “art,” in addition to skills, craftsmanship, and technologies, it also holds significance in process, channels, and also ways that people connect with each other. Historically, art from every era has all attempted to break some kind of structural confinement, and tried to find a new exit from the process of doing so. The random serendipitous ways of linking via social media has opened up a new and fantastic gateway, whereby a powerful creative force is formed and shapes humankind’s collective wisdom.

The value of the internet is increasing due to the number of clicks, and shared platforms have also inspired creative formats involving record breaking number of participants in the history of humankind. The interactive mode utilized in art emerges serendipitously via random encounters online. People congregate to socialize, collaborate, organize communal groups together. Some even gather others’ ideas and improve and use them to collaboratively achieve goals that were

perhaps impossible to accomplish alone. Viewing from the psychological level, people subconsciously have the desire to collaborate and spur resonance in each other, and fundamentally, we are equipped with a sense of compassion and abilities to work and benefit from others. With time, our neural response has been trained to automatically reflect the emotions, experiences, and behaviors of the people around us. Despite that technology cannot bring to us biological prowess, social networks, like extensions of our subconscious, could help to link more collective experiences and communal memories together. At the same time, human’s motives behind their actions could be deciphered, as the natural and artificial world, molecular cells and internet routers, and the cosmic microcosm in the human body and online are all mutually referential. Ideas emerge, congregate, and disappear in cyberspace; amidst the transmission and distribution, the process seems to fit with the ideas of the Chinese classic text *I-Ching* or *Book of Changes*, where the tangible is used to shape the intangible, and imperceptible forms give birth to material ones; mind and cosmos, the real and virtual, are like the polar opposites of Yin and Yang. Would the internet facilitate new forms of apotheosis or perhaps constitute a destiny creating machine? Serendipity seems to be unintentionally omnipresent in the interactive processes, and the world becomes a microcosm of our personal subconscious. We are what we click, and what we are clicking is a representation of ourselves.

Earlier communication media embodied a sense of hierarchy, while the cyber world is more democratic, like capitalism paradoxically taking full advantage of communist tools in the virtual world. The various and subtle differences between forms of media are not interchangeable. Inside today’s media superstore, the shelves are stocked with a wide array of items catering to various psychological needs. Social media are like a color palette in progress of mixing, and have blossomed vibrantly unexpectedly. In the end, would social media hold a substantial position in art history? Only time could tell. However, it is certain that whatever the outcome, it has transcended vast psychological, social, and spatial distances and would certainly impact every individual involved in this new era.

TEA = Technology + Entertainment + Art

In view of different technological interfaces available, such as PC, Web 2.0, Social Media, App, Web App, etc., technological developments allow people to break primal barriers constituted by space and time, soaring to the clouds. Internet resource sharing, online virtual world, and social media have all created pioneering cultural activities that are borderless and communal, which have also shifted the focal point from the elites to groundbreaking public collective actions. In this stressful era, we all need some entertainment for emotional outlets, and technological developments have altered the way human culture is produced. Additionally, entertainment will be one of the core media and pivotal channels for the next generation to learn, experience, and absorb culture from.

Integrating the above characteristics, TEA intends to alter the constituents of artworks and the speed they are digested. With new breeds consisting of new DNA, new speed or tempo is incorporated into the artworks, ready to engage in intricate interactions with the public. As the world becomes increasingly flatter, we no longer focus on the sense of space but the matching point of parallel time lines. As traditional media take the backseat and become secondary system, small groups based on specific subjects are secretly coming together and forming new kingdoms. We are closely connected with others in these small realms and also benefit from the advantage of such ability to highly connect and have thus made advancements surpassing our previous generations. As these junctures and the ceaselessly procreating reproducibility continue to alter patterns and combinations for the potential end results, these attributes have thus become new lifeblood for art. This spectacular kingdom created often leaves people perplexed and confounded. However, due to the subtle variants involved, many unexpected amusing occurrences may randomly arise. Similar to many different phone apps out in the market nowadays designed for one to kill time, such as a simple shake of the phone to spur for reactions from the app, this kind of dynamics continues to emerge online and creates many unexpected and enchanting encounters. Net users find themselves in a cycle of infidelity as they bounce from one choice to the next in matters of seconds. At moments like that, what matters is not to have more links but to make the right connections. Social media are booming at present, and is the phenomenon another trendy bubble soon to burst? How long is the flavor of this TEA going to last? When selecting a work, the first criterion to consider is: does it hold historic value and could it live up to the test of time? Only if it has the capability to keep infusing in elements arising in the future can it become truly timeless.

The exhibition of “TEA / Collective Wisdom” will take shape in the following four categories:

I. Socialize or Die (Dive)!

The driving force behind the ceaselessly evolving social media is based on humankind’s desire to socialize and create. The integration of the two elements of “social” and “media” has garnered greater impacts and allowed for the formation of diverse dialogues. The booming social spirit in today’s society is not only demonstrated via social media networks, other non-internet based tools and media could also add to online social possibilities. As human societal structures become more net-like, would new aesthetics and order arise from it? Is innovation driving the society to be a net society, or is the net society the base for such innovation?

The work *Twistori* is a reflective mirror to the many different emotions running rampant on social media. The society today is actually just a different version of an ancient tribal society, and due to the fast paced life, modern people are losing a sense of stability, a sense of home. In order to preserve an internal sense of security, people begin to find small

circles to belong to and to find consolation. As these small circles connect, they go on to form a complete community. A city is a giant base comprised of these weak links. It is a vessel consisting of many small voices, and they congregate and connect to form a collective awareness. Spectators are spurred to engage in self-reflections and even interact through resonance and self-acceptance. Twitter users are often rambling in short phrases to no particular audience; however, when these rambles find a crossing point in time with another person, a shared value is thus formed. Upon entering into the world of *Twistori*, a virtual outlet for everyday distress is found. Through the interactive mechanism, emotions take shape in tangible symbols and are entrusted in the anonymous others; a soulful journey also thereby begins for the formation of a self-reflective dialogue. Another work that engages in psychological participation is *Shadowgram*, and it utilizes visual elements even further by capturing “shadowgrams” of the audience and printing them out as miniature stickers. The audience is then able to place the sticker in a map. As more stickers are placed, more variants and possibilities are formed for the crossing of the real and the virtual. *Hello World! or: How I Learned to Stop Listening and Love the Noise* is a work that investigates the issue of self-acknowledgement. Through the collection of self-produced videos, these small private clips are collaged and projected as a cohesive piece on the wall. It is a collective crossing between the voyeur and the ones being watched. Viewing the internet as a whole, it is not difficult to observe the ongoing coming and going of trends. It is a stage open for anybody trying to capture fame. On this global stage, personal existence is not simply an affirmation of the self; it is produced subtly and intricately through a collective effort; it is the accumulation of click rates and how many “likes” are collected. The collage breaks the linear quality of time and forms an imaginative space. The use of technological media enables people anywhere to meet in the virtual realm, and people are able to cross time and space in this rapid era of information through the constantly updating newsfeeds and boundless possibilities available to them. The diversity in the virtual realm brings immensurable satisfaction and has consoled and appeased the emotions buried in people’s subconscious. An outlet for stress to release is offered and is also further developed into a group therapy for the mind and soul. Whether watching or being watched, being the performer or the spectator would only depend on your decision in that moment to choose which side you want to be on.

Forage Tracking and *Trash Track* are two works by MIT SENSEable City Lab, which utilizes global GPS tracking system and cellular phones to extend collective intelligence from people as individual units to objects. The objective of *Forage Tracking* is to increase the visibility of informal recycling groups, and for the public to become aware of the contributions these groups have made for the city. Furthermore, it intends to find an efficient way for the recyclers and the people with things to be recycled to form a new collaborative relationship. *Trash Track* is another project that is designed to find a more efficient way to transport waste and to lower carbon emission rate to the lowest possible. Cities could use these data to educate people about making better consumer choices for a more sustainable future for our planet.

II. Hyper Trip

As a person spends more time online, s/he has less time left for the real world. Exchanges and social activities conducted virtually have long become a substantial part of people's everyday hybrid life, twisting and turning the latitudes and longitudes in virtuality as well as reality, roaming online, offline and in between. The quality and quantity of the links are connected with our state of mind, and some people may feel depressed or alone if they make very few connections online. In the realms of reality and virtuality, the gap between the emergence and disappearance of connections allows the artworks to take shape, full of dramatic and imaginative energy.

Buscando al Sr. Goodbar (Looking for Mr. Goodbar) is based on everyday videos people have uploaded onto YouTube, and the videos are connected geographically and used as guiding virtual documentaries for an actual journey in the real world. The geographical points remain the same, but through the artistic endeavor of linking together the virtual and the real, the final outcome presented at the museum is a work of compressed time and space. The artist's objective is to spur for thoughts and discussions about people's interactions online under a contemporary urban setting. Traditionally a shared community is established via connections made on a geographical location; as the world becomes smaller, we are granted more possibilities to connect with each other online. The value that we now focus more on is the spontaneity of time. History is similar to a collective illusion; in the past, a camera is an extension of our eyes, and photographs are certificates of our memories. However, with the capability to alter or manipulate images, our generation has created more fictitious history than before. If all the accurate and important wisdoms in history have all been preserved and treasured, it then also makes sense for the wrong information and lies to be reevaluated now.

III. Wisdom Association

If a person owns very few weak links, it would be harder for him/her to navigate information from the other side of the world, since s/he may be confined to the limited resources at hand. The internet has allowed information integration and exchange to surpass the constraints of time and space, and it has allowed for the passing of the links of collective wisdom to rapidly create tremendous communal effects for the areas of economy or knowledge culture. If the trend to alter a piece of work continues to rise, it would also indicate that the public has an increasing interest to remake something, and the works shared online would be taken over by netizens. These works that are undergoing continual shifts and progressions would come to form a collective significance.

American artist Aaron Koblin's *Ten Thousand Cents* and *The Sheep Market* are works created with the crowdsourcing platform, Amazon Mechanical Turk. The works are based on labors generated by people that have volunteered for the task online. The jobs involved are usually more tedious and require massive manual labor hard to replace by computer programs. The operation method consists of simple yet tedious and time consuming tasks that are divided into smaller segments and outsourced to others that are paid by per unit/project basis. The job is posted online to recruit a large group of people willing to work on the task. Every individual segment created by these volunteers would become an integral part for the final project. Seeing the behind-the-scene for any advanced technology establishment, many jobs still require manual labors to work on the line. They are like tiny screws assigned to put together specific parts. However, their hard work and production have resulted in the accessibility we enjoy today for owning different technological gadgets for connection with others, and because of this, we are able to connect with the world for a broader global perspective.

Exquisite Clock is a work that encourages people to take note of everyday details. Through collective efforts, the time piece online is filled with creative visual elements. The endeavor also blurs the lines between the roles of the artist, creator, producer, and consumers. People from around the world are able to connect through links made online and via phone apps. While maintaining the customary habit we hold for the object, through design and reconstruction, the act is turned into a collective art piece. Modern people have by now been trained to react when stimulated. *Ideogenetic Machine* is another piece that asks for public participation. Through the public's continual involvement, the story and image continues to organically expand and progress. The images used in the comic never repeat, and the blank word bubbles provided with the software for the comic story are open for the audience to fill in with their own dialogues. These collective efforts then come to form this story in the comic form that is produced by the public audience. For *Swarm Sketch*, the audience is both the creator and also the critic. The visuals are dictated by the audience's preferences; however, with the continual reproduction, the animation also continues to create ever changing images, and thus forming a sense of eternity.

What is the relationship between man and machine? Is open source a sustainable way to run a creative society? Where is the boundary between artificial and organic? This is an era where it is hard to get a design to be perfect at the initial try. It must go through adaptation and changes to improve and undergo redesign of the original structure to attempt to produce a truly organic good design. Can digital creations have the subtlety we know in the natural world? These are the issues addressed by artist Scott Draves with the *Electric Sheep*, as it is a work that has resulted from organic coexistence and collective participation.

Taiwan Gold is a concept proposed for this exhibition to search for a color that is uniquely Taiwan. It is an unprecedented expansion of grass root energy that intends to rekindle subconscious behaviors and memories through public participation. It is an endeavor to gather at a profound level communal memories and awareness that are distinctively Taiwanese. The objective is for the contributors and the audience to discover Taiwan's cultural depth and essential elements through this work. Color is a form of memory trigger. It plays important roles at festivities, and *Taiwan Gold* is representative of life's beauty, a golden glistening memory that holds a special place in the people of Taiwan. Through the recalling of shared memories, life's experiences and touching moments, by accumulating the wisdoms from the public, the quest is embarked for the search of "gold". **Taiwan Gold** is intended to be discovered via collective wisdom at the end of this exhibition. The audiences could freely upload the results they have gathered and to turn them into shared resources. The image produced from the collective wisdom is always ready to be altered and to stimulate for other imaginative thoughts from other contributors. The solid, strong, and unpredictable visual effects will spur for more interactions and impacts, and the unexpected outcome will originate from face-to-face exchanges. If we could cultivate more dynamic weak links and open up to them with a generous and unbounded attitude, life will have more surprises and enchanting encounters waiting for us. Open resources will lead to new innovative models to be made available for wider uses, and this is how we enter the time of shared creativity.

IV. Inter-struction

The ever-evolving subject and communities in the virtual realm, while breaking down the pre-existing social relationships, also allow new possibilities and connections through the processes of organic deconstruction and reconstruction. Spurred by the rise and fall of powers between the worlds of reality and virtuality, hidden communities link and form relationships, and from there, we investigate the future prospect of social media. Some appear like masses joining forces to deconstruct and reconstruct, and therefore, amidst the deconstruction, reconstruction continues, and sub-cultures dwelling amongst popular cultures also give birth to new layers surpassing their original designs and intentions.

The reason that the internet is so vital is not because a brave new world has risen from it; it is because of a more profound extension of old world order. Two works are included to deal with sensitive issues pertaining to privacy, and they are **Face to Facebook** and **People Staring at Computers**. These artworks have caused issues to continue to rise from them and deal with boundaries and problems between public space and personal privacy. The conditions of privacy are also changing because of technology. Changes seem to be happening in unexpected ways and at extraordinary speed, and are influencing our life tremendously, while we are still unsure of how to regulate them. In other words, we have yet to find accurate social and legal terms to draw lines for the evolving conditions. Digital society has already taken root steadily, but its legal guidelines are still just getting started. We seem to only be able to follow the flow of time and technology,

and attempt to define new game rules as fast as we can. For most people, technology is foreign and stressful. Moreover, developments brought forth by technology have caused contemporary privacy issues to be quite different from before. Laws that rely on individual cases to form policies are inefficient, and when faced with technology induced privacy issues, it seizes to keep up with the rapid pace and becomes quite ineffective. This is because in addition to technology being foreign and stressful for many, privacy deals with very personal issues. Therefore, each individual's level of tolerance for giving up privacy for certain benefits is quite different. On the other hand, many new policies, technologies or viewpoints tend to guide people into the formation of a collective lie. Therefore, the compromise between privacy and the correlating social values or legal rights usually differs from case to case. When someone claims that his/her privacy has been invaded, there usually is an underlining opposing interest involved; hence, understanding what actions tied with other interests could cause privacy invasions would be equally as important as understanding privacy from a legal point of view.

Rate Beat uses electromagnet placed in a bottle to make coins jump, and the piece is simultaneously connected to online currency exchange rates. The work looks into the issue of information transparency and visualization in this era. The online economic structure offers the potential for people that have been struck with good luck or creative individuals to gain unprecedented fortunes from it. However, the source of the wealth is not from an establishment but from connections made, and oftentimes, no direct contact is ever made for any monetary exchange; instead, being exchanged are free services. In this new found capitalism, competition does not disappear or dwindle; it has been turned into a different context. When we look further into the internet, we can see that the internet is actually a reflection of the different vital layers within the contemporary society.

The core value of TEA is based on social interactions transmitting interactive messages or beliefs. The wordplay on TEA also signifies the spreading of an aroma, and how it could permeate through walls and confinements and expand continuously through the powers of social media. The mission of TEA is to form a new life style. Similar to how tea is such an integral part in Asian cultures, the movement of TEA is about the amalgamation of the internet and communities, just like how a good cup of tea is able to gradually unfold through the brewing process. The impacts and issues spurred will also unfold and from which leadership would be formed. As the trinity of technology, entertainment, and art are combined as one, TEA becomes the grand embodiment of all senses. TEA 1st is the making of tea through "Collective Wisdom", and being harvested are current trends and insights. As a good cup of tea has the potential to be brewed over and over, the ideas of TEA intend to be extended into a movement, an iconic declaration for our era.

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TEA — 集體智慧

傑弗瑞·史塔克 | 曼努艾拉·納弗

網路參與藝術行動—展覽說明

網路的發明，讓藝術計畫得以透過眾人協力完成。這已經不是新聞。而社群網站時代的來臨，更是前所未有地讓大規模群眾參與藝術創作過程。

網路興起，藝術家在面臨創作挑戰的同時，也獲得嶄新的藝術表現方向。早在1970年代，藝術家便開始挑戰與大量陌生人溝通。美國藝術家戴維斯（Douglas Davis）在德國第四屆卡塞爾文件大展的作品〈**最後九分鐘：國際衛星現場轉播**〉便是一例。儘管這件作品探討的領域是實況轉播、傳統看電視的單向溝通模式，以及電視轉播的可能性，戴維斯在1994年延續此概念，進一步發想出〈**全世界第一個共同創作的句子**〉。這件作品，可說是全球首件透過網路陌生人共同完成的藝術。

「我直覺地想到鍵盤，而不是影像或其它『表面的』藝術。鍵盤是網路獨有的互動方式，是網路跟電視最大的差別。有了鍵盤，人們可以暢所欲言，表達無礙。也就是說，觀者與我之間，可以產生更強烈的私密聯結。既然如此，何不讓全世界的人合作寫出一個句子呢？」¹

自此，藝術家們開始發想各式各樣的活動，透過網路，發派任務給非特定的群眾，形成所謂的群眾外包系統。藝術家給網友的基本任務包括發想、蒐集、貢獻、溝通等等。只是，跟這麼多陌生人分享創作過程，究竟從中得到什麼樂趣呢？

聚眾

美國藝術家亞倫·科柏林（Aaron Koblin）邀請民眾共同完成〈**綿羊市場**〉這件作品。為了號召群眾「畫一隻臉朝左邊的綿羊」，藝術家在2006年透過亞馬遜甫成立兩年的土耳其機器人網站發佈訊息。2008年，科柏林與日本藝術家川島高（Takashi Kawashima）合作，再次以付費委託創作的方式完成〈**一萬美分**〉。藝術家透過土耳其機器人網站號召所謂的協同創作者，每人分別畫出百元美金鈔票的一萬分之一，藉此獲得一分美金的酬勞。藝術家一方面透過專業人力市場網站發派任務，吻合陌生「勞動力」的創作主題，另一方面，完全透明化的創作過程，讓藝術家得以提出相關議題，包括創作歷程的改變、人力市場的狀況等等；更重要的是，得以探討新科技及媒體改變藝術創作。

「聚眾」一詞取自索羅維基（James Surowiecki）2004年的著作《群體的智慧：群體為何比個體聰明；集體智慧如何塑造商業、經濟、社會與民族》。科柏林的作品之所以受到關注，不是因為他號召眾人參與，而是他透過聚眾的方式，讓許多單一的創作聚合為一個整體作品。2005年，澳洲藝術家彼得·愛德蒙（Peter Edmunds）也運用此方式完成〈**你也來一筆**〉，可說是第一起採用網路聯合素描的實驗。每週，愛德蒙挑選出不同的素描主題，網友們每次造訪網站，都可以貢獻幾筆（至今共完成442件素描作品，總計206,421條線）。

2011年紐西蘭藝術家姜小蠻（Nova Jiang）的〈**漫畫接力**〉則是另一個集體創新作品。本計畫的焦點同樣不在於個別創作，而是共同的成就。在這個裝置中，藝術家把參觀民眾的剪影變成漫畫的題材，與觀眾們聯手在展覽期間述說故事。

非自覺性參與

上述提到的作品都是民眾在有意識的狀態下，參與藝術家發起的活動。然而，當藝術家在網路上蒐集圖片、聲音、文字及影片檔案，融合出新作品，形成「網路就是藝術家的資料庫」時，民眾便很可能在稍不注意之間參與其中了。2011年，義大利藝術家保羅·奇理歐（Paolo Cirio）及亞歷山卓·路多維可（Alessandro Ludovic）的創作〈**面對臉書**〉，便是相當重要的事件。他們發現人們缺乏網路創作權的概念，於是利用著作權的執法漏洞，透過創作，反映出人們面對個資被公開揭露時的態度。〈**面對臉書**〉利用自製軟體，隨機竊取上百萬名臉書用戶的檔案照片及身分，資料被上傳到專為計畫設計的交友網站，還加上臉部辨識系統軟體相互聯結。最後，網站站長不但得想辦法把資料移除，還得面臨臉書的指控。不過，展覽觀眾倒是可以藉此檢視事件的來龍去脈，深思各種與作品相關的溝通形式。

2011年，美國藝術家凱爾·麥唐納（Kyle McDonald）以〈**盯著電腦的人們**〉探討公私之間的界線，他同樣採用非自覺參與式藝術。想像一下：偷偷地在紐約兩間生意很好的蘋果專賣店展示電腦放入特別的裝置，每隔一分鐘，軟體啟動展示機台的內建相機，自動拍下正在試用電腦的民眾。一張張人們盯著電腦的照片被傳到中央伺服器，並在網站公開。不只這樣，最後一天，這些被自動拍下的照片還出現在店內的電腦上。蘋果公司跟聯邦政府特勤處雙雙採取行動，而作品本身，基於它所探討的議題本質，至今依然完好地放在網站上。

¹ 戴維斯（Douglas Davis），引自波格達（Tilman Baumgärtel）著《[網路藝術] 網路藝術的新元素》（[net.art 2.0] Neue Materialien zur Netzkunst: New Materials Towards Net Art）（紐倫堡：紐倫堡現代出版社，2001），頁60-62。

美國藝術家克里斯多弗・貝克（Christopher Baker）運用五千多段來自YouTube及臉書的影音日誌，完成〈**大家好！**〉。藝術家親自挑選出五千多則令他感到興趣的故事，但大部份的人卻是在走過這個大型影音裝置之時，才會留意這些架構出整體作品的影音片段，而大家也得以用最詩意的方式，感受自己面對浩瀚網路所產生的迷戀與無力感。

美國藝術家艾美・禾伊（Amy Hoy）與奧地利藝術家湯馬士・傅胥（Thomas Fuchs）同樣地也利用人們的非自覺參與，完成2010年的作品〈**推特心情快照**〉。他們寫了一個程式，即時挑選推特上有關愛、恨、認為、相信、感覺、希望等關鍵詞的發文，並以跑馬燈的方式同步在網站上。這是一個關於社群的實驗，用來普查世人們的愛、恨等等感受。本計畫更真實地顯示出藝術家對人們未假修飾的基本需求與日常生活有多麼感興趣。

各種意見與多元性

藝術家之所以利用各種社群服務與網友合作，都是為了取得不同意見及多元貢獻。假設有一個世界共同的大腦，將每個人的知識積沙成塔——英國科幻小說先鋒威爾斯（H.G. Wells）早在1938年便提出了集體智慧的概念，而歐雷特（Paul Otlet）在1934年的著作中更發想出一個全球集體知識網絡，他企圖建立一個知識檔案庫，確保國際間的和平。這麼說來，2001年成立的維基百科更是邏輯之下的產物了。總括來說，1999年起，Web2.0及各種創新科技，如端對端技術（對等網際網路技術）相繼興起，多元意見得以透過網路發聲，更多有趣的事情相繼產生。

同一年，美國藝術家史考特・德雷弗斯（Scott Draves）發起〈**電子羊**〉計畫。他寫出一個線上程式，至今串聯超過四萬五千台電腦，形成「超級大電腦」現象。藝術家提供免費下載螢幕保護程式，運用一套演算系統，讓電腦及操作者能夠左右螢幕的動態畫面（簡稱電子羊）。

〈**日常片刻**〉則是巴西藝術家喬奧・恩力克・韋爾伯特（João Henrique Wilbert）及義大利班尼頓集團傳播研究中心（FABRICA）2009年的作品，這個標題令人想起參與式藝術的起源「精緻屍體」（Exquisite Corpse）。「精緻屍體」是1920年代法國超現實主義者發起的休閒遊戲，參與者利用摺紙共同創作。韋爾伯特以這個遊戲為原點，另創新格。為了報時，他蒐集拍攝日常生活中具有0到9數字造型的事物，圖片上傳伺服器後，在網站上隨機選出並列。我們唯一看得出連貫性的是數字所顯示的當下的時間，而這也是系統挑選圖片的根據。

還有兩件作品也是集眾人創意所完成。奧地利電子藝術中心未來實驗室2010年的作品〈**剪影留言板**〉就像一個社群雕塑創作，觀眾只需要提供自己的剪影，寫一段個人意見，就能讓作品衍生發展。具體作法是，觀眾擺出各種具有戲劇化表情的姿勢拍照，亮光的背景讓照片剪影化，使看展人更能把焦點放在各種姿態上。剪影最後將會被轉印裁切到貼紙上，並附上參與觀眾寫的對話框。如此一來，觀眾便能在展覽空間留下告示。

另一個鮮明的對照組是智慧型手機app作品〈**看展ing**〉，它像個充滿創意的小型工作坊，鼓勵觀眾拋出看法跟感想。藝術家鼓勵觀眾用手機拍下藝術作品，上傳後，寫下對照片的評論，所有的照片都在網站中展示，參與者還能從網站上列印成明信片當作紀念品。累計而成的〈**看展ing**〉，充份印證多數觀眾已經從單純的觀者轉變成參與者了。

去中心化

誠如策展人耶舒可（Susanne Jaschko）及艾佛斯（Lucas Evers）在2010年的展覽「典範過程」的展覽手冊中所說，參與式藝術產生兩個現象。其一，無作者的結構，或僅存基本著作權的結構已經撼動整動藝術生態。其二，藝術圈中愈來愈常看到從被動觀者變成參與者的現象。在1990年代，想讓大眾對藝術產生興趣，進而參與創作、溝通或是貢獻一己之力談何容易。反觀現在，新科技及網路媒體已融入日常生活，藝術家想要與大眾接觸，簡直易如反掌。因此，類似自我賦權的現象隨之而生，藝術創作者變得傾向獨立於藝廊、藝術市場及其它機構。

而無遠弗屆的網路讓藝術家也能在人口外移的郊區工作。如果沒有網路，加拿大藝術家蜜雪兒・泰倫（Michelle Teran）就不可能完成2009年的作品〈**尋找古德巴先生**〉。泰倫接受西班牙科技表演（Techformance）的委託，在穆爾西亞（Murcia）執行公共空間介入計畫。泰倫蒐集挑選穆爾西亞居民放上YouTube的影片，她跟觀眾們坐著巴士，找尋影片拍攝及上傳的正確地點。正因YouTube影片已自動標上定位標籤，要找出數位資料的實體發生地並非難事。在這場巴士旅行中，觀眾不但找到影片的拍攝地點，還能跟拍攝者碰上一面。

由波士頓麻省理工學院感應型城市實驗室（SENSEable City Lab）執行的〈**垃圾追蹤計畫**〉與〈**回收追蹤計畫**〉，則是屬於外包計畫，一般來說，這是官員或是政府行政人員的執掌範疇。在〈**垃圾追蹤計畫**〉中，他們把便宜的GPS定位感應器裝在垃圾上，而〈**回收追蹤計畫**〉則是把GPS放在巴西聖保羅的城市清潔人員身上。這兩個計

畫，都是藉由軟體把垃圾或清潔人員的行走路徑圖像化並加以分析。人們參與這類計畫的動機。正是源於對社會的承諾及公眾議題的興趣。

工具化？

近年來，西方國家大量開放大眾介入藝術創作。過去，藝術創作往往被視為神聖不可侵，但現在，藝術家視開放性為新的創作動機來源，他們以網路陌生人為媒介，尋找溝通方式、實驗計劃、以及巧合有趣的互動。值得注意的是，愈來愈多委託單位對參與式藝術感到興趣，包括市政府、私人企業及文化機構等，這些單位把市民、客戶、文化團體等的參與視為推廣行銷及發揮政見好感度的方法。儘管網路募捐是藝術圈未來重要的籌款途徑，政治領導若也想透過看似直接民主的外包來逃避職責，就不合適了。奧地利／荷蘭作家沙佛（Mirko Tobias Schäfer）的著作《文化人渣》以及德國作家米桑（Markus Miessen）將出版的《參與者惡夢》，都對目前的參與式系統鄭重提出質問。藝術家如何面對被工具化的現況？值得觀察。

TEA / Collective Wisdom

Gerfried Stocker | Manuela Naveau

Participative Artistic Practice via the Internet – Notes on the Exhibition

That an art project can be based on participation by a wide array of persons is by no means a recent spinoff of the advent of the internet. But it is indeed the internet and especially the social web that has made it possible for an unprecedented number of individuals to collaborate on artistic processes.

The invention of the internet created a medium that posed a novel challenge to artists and their works of art, while also offering them new channels for artistic expression. The challenges of communication with many strangers already began to be taken up by artists in the 1970s—for example, *The Last Nine Minutes: Live Performance for International Satellite Telecast* by Douglas Davis (US) at documenta VI in Kassel, Germany. Even if Davis' performance was still well within the realm of the live, one-way communications style of conventional TV viewing and the telecommunications possibilities of the day, he nevertheless went on from there to the 1994 work *The World's First Collaborative Sentence* with which he brought forth what was probably the world's first work of art that was created collaboratively by a group of people unknown to one another and interacting via the internet.

“Immediately I thought of the keyboard, the means of interaction allowed by the Web but not by video or other ‘flat art’. The huge difference between broadcast TV and the Web is the keyboard. With that people can say anything; they have full expressive capacity. This means a more intense and personal link could occur between me and the audience. So why not get the whole world together to write a sentence?”¹

Farming out activities to a large, undefined group of persons via the WWW—the system of so-called crowdsourcing—has been adopted by artists in a variety of ways. Creating, collecting, distributing and communicating are the essential activities that artists delegate to their online audiences. But what exactly is it that artists find so interesting about sharing the creative process with so many complete strangers?

Aggregation

The works of Aaron Koblin (US) involve members of the public as creators or collectors. For his project ***The Sheep Market*** he called upon them to “draw a sheep facing to the left.” The appeal was issued via Amazon's Mechanical Turk in 2006 and thus two years after this platform was launched. Remunerated creative processes likewise constitute the basis of his 2008 work ***Ten Thousand Cents*** produced collaboratively with Takashi Kawashima (JP). Each so-called co-worker recruited via Amazon's Mechanical Turk was compensated with one US cent for drawing a 10,000th of a \$100 bill. On the one hand,

Douglas Davis, in: Tilmann Baumgärtel, *[net.art] New Materials towards Net Art*, Nürnberg, 2001, pp. 60-62.

the artist was assigning jobs via a professional labor market site on the internet in conjunction with the production of his work of art by an unknown “workforce”; on the other hand, he made this process totally transparent, and thereby conducted an inquiry into issues such as changes in work processes and the labor market in general, and especially into how new technologies and media are bringing about changes in artistic practice.

In the sense of the term “aggregation” as used by James Surowiecki in his 2004 book *The Wisdom of Crowds: Why the Many Are Smarter Than the Few and How Collective Wisdom Shapes Business, Economies, Societies and Nations*, the individual contributions by members of the public are not what is interesting about Aaron Koblin's work, but rather their aggregation, the collection and amalgamation of the individual contributions into a unified whole. This certainly applies to ***Swarm Sketch*** a 2005 work by Australian artist Peter Edmunds that is considered the first joint online drawing experiment. Each week, a new term is chosen to be the week's sketch subject. Website users can then contribute a small amount of line per visit (206,421 lines contributed to 442 sketches to date).

Ideogenetic Machine (2011) by Nova Jiang (NZ) is another project that collects contributions in order to create a collaborative whole and something new. In this project as well, the focus is not on the individual contributions but rather on what they amount to together. In the installation, the artist requests that visitors contribute their silhouette to become part of a comic strip. Thus, the artist and the audience jointly tell a story during the exhibition's run.

Unintentional Participation

In the examples cited above, collecting contributions is an act done by the artist that makes possible intentional participation on the part of the public. The “archive that is the Web” also makes possible unconscious or inadvertent participation by individuals. Artists harvest information in the form of image, sound, text or film files from the internet and blend these elements together in their works of art. One outstanding example is ***Face to Facebook***, a 2011 work by Italian artists Paolo Cirio and Alessandro Ludovico. They take advantage of the lack of adequate structures to enforce copyrights and people's lack of awareness about the concept of authorship on the internet to demonstrate to us how we deal with the public revelation of information. ***Face to Facebook*** used homebrew software to steal a million profile images and identities at random on Facebook, uploaded them to a dating website set up expressly for this action, and then interlinked them through the use of facial recognition software. Since then, the proprietors have had to take their operation offline and they're facing charges filed by Facebook. Visitors to the exhibition can take a close-up look at the whole chain of events and pore over the varied communications concerning this art project.

People Staring at Computers, a 2011 project by Kyle McDonald (US), similarly explores both the borders between private and public information and unintentional participation by individuals. Imagine this: special apps were covertly loaded to all demonstrator models on display in two very busy Apple Stores in New York, so that once a minute the software activated the camera built into the computers on sale there and automatically photographed the individuals who happened to be in the process of trying out the particular device. These shots of people staring at computers were transmitted to a central server and exhibited on a website. Plus, on the intervention's last day, the automatically produced snapshots were displayed on the devices themselves in both Apple retail outlets. Apple as well as the United States Secret Service went into action. As for the work of art, it's still being tended by an online community and, due to the discussions with it at their center, is still alive and well.

Hello World! or: How I Learned to Stop Listening and Love the Noise by Christopher Baker (US) is an installation made possible by the artist helping himself to more than 5,000 video diaries on YouTube and Facebook. Now, it's clear that what Christopher Baker is interested in are the individual stories related by more than 5,000 people and personally selected by the artist. Nevertheless, it is precisely the aggregation of these motion pictures and sound fragments into a walk-through sound & video installation that evokes on the part of those beholding it images and feelings that frame the assembled conglomeration of contributions and also get across in a most poetic way the fascination as well as the sense powerlessness people feel in the face of the enormity of the internet.

Twistori, a 2010 project by Amy Hoy (US) and Thomas Fuchs (AT), is also based on people's unintentional participation. The artists wrote a program that performs real-time scans of thousands of Twitter tweets worldwide for terms such as love, hate, think, believe, feel and wish, and presents them on a website in the form of crawl text on a news ticker. The artists refer to what they've done in terms of a social experiment designed to get an impression of what people all over the world love, hate, etc. This project as well displays—in the true sense of the word—artists' boundless interest in unfiltered knowledge of people's basic needs and everyday lives.

Variety of Opinions and Diversity

Obtaining a variety of opinions and highly diverse contributions is another reason why artists opt for collaboration with an online collective of countless persons and utilize diverse social media services as a means to this end. Considering the hypothesis of a world brain, the collective repository of individuals' knowledge that English science fiction pioneer H.G. Wells already put forth in 1938, as well as the publications of Paul Otlet, who came up with the vision of a world knowledge network for all in 1934 and sought to set up an archive of knowledge as a means of assuring international peace, makes it clear that the development of Wikipedia since 2001 has simply been a logical consequence. The advent of Web 2.0 and

technological innovations since 1999 like peer-to-peer—i.e. processor-to-processor link-up within a network—have made lots of interesting things happen as far as participation and diversity of opinion on the internet is concerned.

That same year, artist Scott Draves (US) created his ***Electric Sheep*** project. He wrote a program that was disseminated online and has now linked up more than 450,000 computers into a joint “supercomputer.” Based on the system of a screensaver offered for download free of charge and a corresponding algorithm prescribed by the artist, the computers and the people behind the processors can influence the design of the animated sequences (Electric Sheep for short).

Exquisite Clock (2009) by João Henrique Wilbert (BR)/ Benetton’s communication research centre FABRICA (IT) is a work bearing a name that evokes the origins of participative art. “Exquisite Corpse” or “Cadavre Exquis” is what surrealists in Paris of the 1920s called a parlor game in which several participants turned a folded piece of paper into a collaborative work of art. João Henrique Wilbert has now taken the system of play and added new rules. In order to impart an image to the time of day, he collects pictures from everyday life describing a number from 0 to 9 and saves the images to a server. On his website, he juxtaposes images chosen at random by the system. The only constant is the current time of day, on which the selection process of the images is based.

Two additional projects that profit from the diversity and creativity of the persons contributing to them are works by the Ars Electronica Futurelab (AT). ***Shadowgram*** (2010) is like a social sculpture that thrives and grows as long as the installation visitors contribute their shadow and their opinion on a particular topic. The participants pose expressively as if they were on stage and are photographed as they do. The illuminated background provides the perfect lighting for a shadow shot and also attracts public attention to the audience members’ gestures in response to the topic. The shadow portraits are then printed to adhesive foil and excised. These images and the inscribable adhesive speech balloons that can be applied next to them enable installation visitors to leave behind communiqués in the exhibition space.

A stark contrast to this approach is the ***Ars Wild Card*** smartphone app, actually a creative mini-workshop that prompts installation visitors to contribute ideas and impressions. Audience members are invited to use their smartphone to photograph the works of art and upload the pictures. Plus, a commentary function lets them post messages about the images. All contributions are exhibited on a website; contributors can also print out ***Ars Wild Card*** postcards on site and take them home as souvenirs. The accumulation of printed-out *Ars Wild Cards* at the exhibition is convincing testimony that much of the audience has successfully made the transition from observer to participant.

Decentralization

According to the statements curators Susanne Jaschko and Lucas Evers published in the catalog accompanying their 2010 exhibition “el proceso como paradigma / process as paradigm,” the fact that participation is being increasingly used to generate works of art is attributable to two factors. On the one hand, the art system has been shaken up by the absence of structures with respect to authorship and simple structures with respect to copyright. On the other hand, a shift from passive observer to involved agent can generally be observed in the art world. In the 1990s, gaining access to a large number of people interested in art for purposes of creation, communication or distribution involving them was no easy matter. But now, new technologies and the internet have put an everyday medium in place that makes it quite easy for artists to reach their public. A sort of self-empowerment has occurred, bringing about a situation in which the people who create art have become a bit more independent from, for example, galleries, the art market and various institutions.

One of the things the internet’s global reach makes possible is working in places that are suffering from depopulation due to a rural exodus. One project that could not have been conducted without the internet is ***Buscando al Sr. Goodbar*** (2009) by Michelle Teran (CA). The artist was commissioned by Techformance in Spain to plan and execute an intervention in a public space in the Murcia region. What Michelle Teran did was to collect selected videos that people in the region had put on YouTube. A bus tour took the artist and her audience to those locations at which the YouTube videos had been shot and uploaded, since automated geo-tagging of video files on YouTube makes it possible to trace the digital data back to a concrete physical location. During the bus tour, the audience could assess the actual location of the video and also meet its maker on site.

The ***Trash Track*** and ***Forage Tracking*** actions by the SENSEable City Lab at MIT in Boston are additional projects that have outsourced working processes that are normally within the purview of elected officials or city administrators. In ***Trash Track***, real garbage was equipped with low-priced GPS sensors, whereas ***Forage Tracking*** hooked up its GPS sensors to city garbage collectors in São Paulo, Brazil. In both projects, staffers wrote software that visualized and analyzed the route taken by the trash or trash men. Social commitment and interest in social issues are what motivated people to participate in these projects.

群眾力量的興起—— 談集體智慧時代的藝術家與美術館

林 曉瑜

Instrumentalization?

The use of participative and open creative processes to generate works of art has increased greatly in Western countries in recent years. Artists consider this possibility to be a new source of motivation for the creative process that has tended to be hermetically sealed off from input by others in the past, and accordingly seek out communication and experimentation, coincidence and playful interaction online with lots of total strangers. It is also interesting to note that such participative works have also gained popularity among commissioning clients such as municipal government agencies, private enterprises and cultural institutions who see involvement by lots of people—citizens, customers, the cultural community, etc.—as a way to promote themselves and generate goodwill for their agendas. Nevertheless, outsourcing activities—for instance, to citizens in the sense of direct democracy—will not become a convenient way for political leaders to evade their responsibilities any more than crowdfunding will become a significant solution to financing art projects in the future. Books like *Bastard Culture* by Mirko Tobias Schäfer (AT/NL) and Markus Miessen's (DE) soon-to-be-published *Albtraum Partizipation* (Nightmare: Participation) seriously call into question the current system of participation. It will be interesting to see how the artists react to being instrumentalized in this way.

2006年，時代雜誌將「你」（You）選為當年的風雲人物，雜誌封面是一台電腦，電腦螢幕部份以鏡面材質反映閱讀者的臉龐——此舉彰顯了「個人」在網路時代的貢獻與重要性，也揭示網路所匯集的群眾力量，足以建構與改變當代社會環境，每個人都能運用網路發言權，促成輿論興起或影響事件發展方向。透過資訊與智慧的分享，網路成為我們現今獲得訊息的最主要甚至是最可信來源之一——維基百科（Wikipedia）便是一例；它藉由共筆方式，讓眾人在同一個網路平台上貢獻智慧及修改前人錯誤，使資訊達到最精要及正確化之結果，成為現今大家搜尋資料或引經據典的來源。集體智慧透過集體力量的去蕪存菁後，儼然成為具權威與公信力的資訊。

在個人意識與集體智慧高漲的資訊時代，藝術創作在原本的單一創作者形式之外，亦逐漸走向民主化，形成人人皆可參與、介入、評論藝術創作的時代。特別是在數位工具的普及與易於使用後，每個人都成為具潛力的藝術創作者，也隨時能向世界展示自己的作品；而美術館作為藝術知識權威的角色與地位，也因應數位科技與時代的進展而有所轉變。班雅明（Walter Benjamin）在他著名的文論《機械複製時代的藝術作品》中早已提到，機械複製技術使藝術原作的傳統意義與權威性消失，藝術品從原有寄生於祭儀的功能中被解放出來，改為奠基於「政治」。藝術藉由新的技術，再也不為小眾獨享或服務，而越來越接近大眾。今日我們回顧班雅明的觀察與預言，印證於網路時代的藝術表現及形式中，更可見當代藝術與群眾的互為影響。因此，本文將探討資訊社會中，群眾力量與新媒體藝術及美術館之間的緊密關係，並關照網路社群所形成的巨大潛力，如何改變藝術家與美術館的角色。

一、藝術新勢力——藝術家 vs. 藝術業餘者（Artist vs. Amateurs）

自“Web 2.0”一詞提出後¹，我們與網路互動的方式也進入一個新階段。網路從原本作為資訊的集中地與資料庫，轉變為強調網路用戶對於網路服務的主動性參與及使用者之間的互相連結，以藉此創造更大效應。社群網站、部落格、微博在近年的方興未艾，串連起世界各地的資訊並讓互不相識的網友們接觸聯繫；而智慧型手機迅速的大量普及，更讓人類生活與網路幾乎無法切割。透過隨身攜帶的手機與簡便的上網機制，我們隨時可以收發Email、在臉書上追蹤友人的最新動態、訂購下一班的高鐵車票、再發個簡訊通知家人等等。所有的社交活動，都能由一台掌上行動裝置完成，而由此所獲得的即時回饋也不斷刺激我們對網路服務及網路活動的熱衷參與。這種熱衷更進一步，造成現代人對「最新訊息」的需求若渴，也使我們因為害怕被隔離而一直保持「上線」狀態，深恐一離線將使自己無法被連結。

¹ 維基百科對“Web 2.0”一詞的解釋，認為最早是在1999年出現於Darcy DiNucci的文章(見http://en.wikipedia.org/wiki/Web_2.0)。另2004年，Tim O'Reilly與John Battelle舉辦了首次Web 2.0會議，討論Web 2.0的概念及「網路作為平台」的意義，並認為Web 2.0的全部，都與如何運用及控制集體智慧有關。

Web 2.0讓每個人都有機會在網路匿名發言，因此促成極度開放自由的網路言論環境，也讓無數的創意與想法毫無限制的被呈現與討論。以往要成為一名作家的過程十分漫長，除了自己辛勤寫作之外，尚視出版商是否願意出版自己的創作。如今，只要註冊一個身份便可成為部落格作者，隨時隨地在網路上發表個人創作，作家之名變得容易取得。此外，網路的開放性讓每位讀者都可為部落格創作留下評語及建議，使作者能獲得即時回饋並瞭解自我創作的修正方向。因此，一篇網路連載小說在創作過程中即可視讀者的反應而不斷進行調整，讀者參與了創作的過程，也多少決定了創作的走向與結果。

而在藝術的領域中，視覺藝術一特別是新媒體藝術，在Web 2.0時代同樣有所轉變。網路的互動機制，打破時空讓眾人可隨時連線溝通，並能主動介入、參與一項事件的過程，這樣的特性使新媒體藝術的創作者身份開始面臨變化。以往我們認為藝術家之所以與眾不同，是因受過漫長的技術訓練，並擁有獨具的眼光、創意與想法，能表達常人無法表達的世界與境界。但在數位工具與數位技術大量普及的現代，掌握一般性的數位科技工具已非難事，且就新媒體藝術來說，因多結合不同的科技媒材與技術，因此創作的完成已難再倚靠藝術家一人之力，而須視情況邀請不同領域的專才加入。因此，新媒體藝術可謂是複合性的專業集合體，也逐漸形成藝術家加上其他領域與科技專才的集體創作模式。藝術家在新媒體藝術創作過程中，或許為概念的主導者，卻不一定能主導最後作品呈現形式的走向。一方面，新媒體藝術家可能受限於對數位科技工具的瞭解，使創作的想像無法被具體實現，因此造成挫敗；但另一方面，藝術家也可能在科技技術的協助下激發創意靈感，藉藝術將科技擴大到更具人文與美感的應用層面。不論是哪一種結果，藝術與數位科技的攜手合作，過程往往充滿不確定性，而時有意料之外的產出。

新媒體藝術結合不同技術或專業領域的交流對話，有許多難以預期的碰撞與刺激。而在Web 2.0的概念裡，群眾力量的加入，使新媒體藝術與網絡社群發生連結，藝術家的身份也受到更大衝擊。Web 2.0所強調在網路上分享與共同合作之理念，被部份藝術家應用在藝術創作中。美國音樂錄影帶導演克里斯·米爾克(Chris Milk)與藝術家亞倫·科柏林(Aaron Koblin)的「強尼·凱許計畫」(The Johnny Cash Project)便是一例。此項網路創作計畫始於2010年9月，克里斯·米爾克剪輯美國鄉村搖滾傳奇歌手強尼·凱許的眾多影像畫面，配合他的歌曲“Ain't No Grave”組成一支音樂錄影帶。重要的是，米爾克邀請網友們在計畫網站上，以音樂錄影帶裡的每一個影像畫面(frame)為基礎，運用特別研發的簡易繪圖軟體，重繪自己心中的強尼·凱許形像。此計畫在開始後半年內便有超過

25萬的網友參與，蒐集到大量被重繪的影像畫面，根據這些畫面，再組合出幾支不同風格的音樂錄影帶，分為「最受歡迎畫面版」、「導演剪接版」、「素描版」、「抽象版」、「點描版」等等。此外，網友們除了可以改變畫面或修改前人的畫面外，也可運用網站上集眾人之力所匯聚的畫面，重新組成自己的一支“Ain't No Grave”音樂錄影帶。其操作簡便及提供使用者多種具創造性的互動方式，使這件作品大受歡迎，成為「群眾外包」(crowdsourcing)藝術創作的一項成功範例。

「群眾外包」的概念已有許多商業或研究型的案例與計畫，而運用在藝術創作上時，其模式多由一人先拋出一個點子或想法，並號召網友們加入提供意見、一起完成作品；但為了避免產生無法控制的結果，號召者多會制定一些遊戲規則或範圍，以便參與的網友有所依循，在其指示與規範下發揮最大創意²。在這樣的活動裡，藝術創作權被開放給大眾了，任何人都可以提供自己的創作，成為集體創作中的一份子。所謂傳統定義中的「藝術家」，其身份則兼具了策劃者、號召者、指導者、編輯者等。在創作過程中，他不再直接主導，而轉變為引導的角色，並讓位以旁觀事件的發生，亦即創作的形成。在此，他已不是唯一的作者，而是由許許多多未經正式訓練的藝術業餘者共同完成作品。因此，在「強尼·凱許計畫」的網站上，我們可以看到作者列表(credit)人名眾多，所有參與這項計畫的網友都被賦以「藝術家」之名。「藝術家」的光環似乎變得親切可及，每位參與者也從短暫的藝術創作經驗中獲得滿足。而集眾人之力所完成之作品，雖發生在虛擬網路空間中，這些藝術愛好者們彼此之間也互不相識，但卻因一個共同的目標而產生連結性與凝聚力，甚至激發認同感與親密感。此種創作類型讓新媒體藝術的互動性特質更為強大，素材的累積與創作的規模被無限擴大，因此概念發起者必須具有良好的溝通與計畫能力，才有可能引導或型塑作品的發展方向。「藝術家」已無法關起門來獨立創作；對外溝通並發動眾人共同參與，成為他操作與達成創作目的的必須手段，廣大的網友們則為他的創作概念做了無限之延伸。而網友們則隨著越來越容易操作的數位科技工具介面，在網路時代得藉由一項創作活動被賦予藝術創作者身份。至此，可預見藝術創作行為或將變成自然的日常生活片段，亦即藝術已經潛入了大眾，而我們也可以想見這樣的身份轉換與群眾力量，勢將人類文化發展推向另一個階段。

二、互動新模式—網路群體 vs. 美術館

群體力量使藝術家的身份受到衝擊與變化，而美術館作為展示藝術家創作及研究藝術與文化發展之場域，雖具有其權威性地位，但亦無可避免必須順應時代正視這股潮流，並思考如何善加運用集體智慧。現今的美術館除使

² 如亞倫·科柏林其他幾件集體創作計畫，可參見<http://www.aaronkoblin.com/work.html>。其中的最新計畫“This Exquisite Forest” (2012)，要求網友們在某些規則下創作接龍式小動畫，並在網路空間與英國泰德美術館展出。

用社群軟體如臉書、噗浪、推特，以及智慧型手機應用程式作為行銷宣傳管道外，部分美術館亦開始研究網路群眾，或規劃新型態的群眾參與展覽與創作計畫，以應用集體智慧促成觀眾與美術館的新互動模式。

2008年，布魯克林美術館(Brooklyn Museum)策劃了一項名為「點擊」(“Click”)的展覽，展覽副標題為「群眾策劃的展覽」(A Crowd-Curated Exhibition)。操作模式為美術館透過網站及網路社群公開徵求以「布魯克林的變遷面貌」(“Changing Faces of Brooklyn”)為主題之攝影作品，由申請者上傳攝影作品的數位檔及創作自述至網站。徵件結束後，美術館開放一個線上平台，讓所有網友們都能「評審」(evaluate)送件作品³，此時申請者的姓名均被隱去，每一位「評審」也無法看見其他人的評論，以避免被作者身份及其他評論所影響。此外，擔任評審的網友也必須回答一些有關個人的藝術知識與專業之問題，以定義自身屬於藝術領域中的初學者或專家，其答案也成為美術館研究資料的一部份。最後，美術館再依據大眾的審查結果，將獲選的作品實體展示於美術館中。此時觀眾可以看到不同的群體(從對藝術知識了解貧乏到藝術專家)所選出／策展的作品，也顯現出不同群體的喜好與品味。

「點擊」一展是當代美術館運用集體智慧的一項範例，也帶出藝術、美術館與群眾三者之間的諸多議題，包含策展的權威性被開放(策展人的角色受到挑戰)、獨立、公正評審機制之設計(隱藏作者姓名與他人的評論，以及每人對每件作品只能投一次票)、菁英與大眾的品味區別(在投票之前必須先定義自我在藝術領域的身份)，與美術館運用網路科技可能面臨的資訊技術問題等等。實際上，公開徵件及票選均為美術館常見的活動，但「點擊」展以網際網路為媒介，自徵件到評審均主動邀請群眾在網上參與，而最後在美術館空間的實體展覽，獲選作品的輸出尺寸大小，亦根據網友的評審結果決定⁴。因此，這項展覽是美術館將展覽的策展權交出給群眾，由群眾取代策展人及專業評審，共同規劃出屬於大眾的一項展覽。然而，這是否表示當代的美術館已經可以完全放下身段擁抱群眾？而大眾所票選出的作品，是否適合被放在美術殿堂並被稱之為「藝術」，抑或只是代表一種「流行」？另外，是否只要提出申請並上傳作品，就可以成為被美術館認可的藝術家？這些問題在展出之後仍被持續熱烈討論著。而「點擊」一展也讓我們看見美術館在規劃運用群體力量時必須注意的一些細節，例如一開始便須將遊戲規則設定、說明清楚，以及活動的網頁介面設計務求簡單友善，以吸引網友參與使用等等。此外，「點擊」展雖是以群眾為基礎的一項計畫，但卻避免讓個體彼此之間互相影響，每位參與者也無法將自己喜歡的攝影作品下載或透過網路傳送。換言之，此展雖應用了Web 2.0的主動參與概念，卻阻斷應有的網路資訊分享模式—此項設計雖係為維護評審的獨立與公正性，卻也因此提醒我們網路輿論可能引起的深遠影響與效益。

另一項將集體智慧運用在美術館的案例為“Steve”(全名為“Steve Central: Social Tagging for Cultural Collections”)。始自2005年，這項計畫起因於許多美術館雖已建置了線上瀏覽藏品網站，但瀏覽人數並無預期之多，究其原因之一，可能是藏品的基本資料說明文字多為專家學者撰寫，而他們所使用的專業語言和觀眾產生了距離。為了縮短這種距離，並讓線上藏品能更充分被運用，同時也為瞭解群眾對藝術品的認知與感覺，因此“Steve”計畫發動群眾，在網站上為自己有興趣的作品貼「標籤」⁵，也就是設「關鍵字」。這項計畫結合了21個館所(包含古根漢美術館、大都會博物館、泰德美術館等等的)96,867件作品，共收到547,446個關鍵字，以及5,510位使用者的協助。從這項計畫網站的統計中，可發現一般大眾對一件藝術品的描述，與藝術學者可能十分不同。例如大都會博物館所收藏的一把吉他，其標籤除了「樂器」、「聲音」之外，也包含了「身體」、「長頸」、「右撇子」等等一般美術館說明文字不會用來描述、分類吉他的用語⁶。又或者「美好的」(nice)這個詞彙，被廣泛標籤在任何觀眾覺得適當的作品上，從繪畫到傢俱到服裝，甚至是一台計算機或打字機。這項集集體智慧之力的計畫結果，成為美術館用來研究觀眾如何觀察與感受藏品的極佳素材，甚至幫助美術館為其藏品進行更好的分類，此外也提供了網路使用者更豐富的關鍵字資源，使其能更容易的搜尋藝術作品。

在個人價值被日益突顯的時代，美術館早已無法高高在上，而必須思考如何促成更多觀眾的主動式參與，及藉由這種互動和群眾共同建構當代藝術與文化的集體記憶。除藉網路社群的強大力量與即時回饋，做為發佈訊息的行銷方式之外，美術館更應利用它讓知識與資源能夠被分享傳遞，並使更多新觀念亦能回傳至美術館內，以提供更好的公眾服務。從「點擊」展覽或“Steve”計畫中均可發現，美術館與網路群眾的互動模式已進入新階段，其基本的展覽、典藏、研究、教育之功能，也越來越需要集體智慧的協力。因此，美術館與網路社群互動的重點，應在於如何造成有效的「接觸」，使每一次的互動能像漣漪般交相擴散與影響，並讓廣大的網友們對美術館產生認同與親密感，以打破美術館那道高聳的圍牆，成為真正為公眾所有的文化知識分享平台。

小結

數位科技與影音多媒體的盛行對人類文化影響甚鉅，究其原因，社群網站的分享功能功不可沒。網路上一呼百應的即時互動，使我們發現自己不是單獨存在，以往「我想做某件事」的單純陳述，已轉變為「讓我們一起來做某件事」的邀請參與，而這同時也激發了我們對創作的慾望。群眾力量的匯聚，可以促成多樣性的想法與觀點同時發生，透過彼此的撞擊誘發更多可能；然而，如何在群力所提供的大量資訊中找到適切的材料與答案，

³ 這項徵件活動共收到389件作品，共有3,344人次參與評審，見http://www.nytimes.com/2008/07/04/arts/design/04cllc.html?_r=0。

⁴ 最後在美術館空間的實體展出，係依群眾的票選結果選出78件，輸出尺寸大小不一，但票數越高者輸出的尺寸越大，以此類推。而所有的送件申請作品，則可以在展覽網站上看到。參見http://www.nytimes.com/2008/07/04/arts/design/04cllc.html?_r=0。

⁵ 此種以大眾之力為物件貼標籤或分類的方式，目前有多種稱法如「社會性標籤」(social tagging)或「大眾分類法」(folksonomy)等等。

⁶ 見<http://tagger.steve.museum/steve/object/291?offset=58>。

仍需要高度的專業、智慧與判斷力。在商業模式中，我們或許可以同樣把決策權交給大眾，以得出符合市場需求的結果；但在藝術的領域裡，藝術家或美術館是否仍有權為大眾詮釋與標記藝術的定義及品味的標準，在集體智慧時代裡顯然面臨挑戰。或許更值得思考的是，如何利用與引領群眾創造共同的美學意識，卻又能讓其保有個人思想的獨特與唯一性。因此，在集體智慧的時代裡，藝術家的角色或許更像策展人，具有組織與擇選藝術物件的任務，並引導全民創作者走向創作的核心目標；而美術館則應與藝術家和網路社群形成有機的循環關係，並在這浮動的對流過程中，將菁英式的美學內涵，轉化為具趣味性且切合大眾生活的創造經驗，如此藝術創作與日常生活終將無縫融合，藝術也將隨著集體力量而無所不在。

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The Rise of the Mass Power – On Artists and Museums in the Collective Wisdom Era

Hsiao-Yu Lin

TIME Magazine's Person of the Year in 2006 was “You” and on the cover was a computer with its screen made of a mirror-like material to reflect the reader’s face. This choice recognized each individual’s contribution and importance in the age of the internet and also revealed the collective power made possible by the internet has enough force to construct and alter the contemporary society, whereby people are able to use the internet to express their thoughts and prompt for certain opinions or even influence the direction for certain events. Through the sharing of information and knowledge, the internet has become one of the most depended and trusted sources of information; an example of this is “Wikipedia”: it is a platform for people to contribute their knowledge and edit other people's mistakes. The purpose is to provide precise and correct information, which has become a source widely used by people today for research and reference. Through the power of collective wisdom, the information collected is edited precisely turning the database into an authoritative and trusted source of information.

In this information age with rising individualism and collective wisdom, art making has shifted from its previous solitary act into a more democratize and accessible phase, where anyone could take part in the making or critiquing of art. Especially after digital tools have become more prevalent and user-friendly, a potential to become an artist is embedded in each person, with the possibility to showcase one's art to the world easily reachable. Because of developments with digital media and the progression of time, there is also a paradigm shift with the museum’s role and position as an art knowledge authority. In Walter Benjamin's *The Work of Art in the Age of Mechanical Reproduction*, he argued that, in the absence of any traditional, ritualistic value, art in the age of mechanical reproduction would inherently be based on the practice of politics. With new technology, art ceases to be exclusive and becomes more intimate with the public. As we look back at Benjamin's observations and predictions with reflections on the artistic expressions and forms created in this internet age, we can then see the inter-related impacts between contemporary art and the public.

Therefore, this essay is a discourse on the close relationship between the information society, collective power, new media art, and the museum and to also place focus on how the immense force formed by the online community has altered the roles of the artist and the museum.

1. The New Force in Art – Artists vs. Amateurs

Since the term “Web 2.0”¹came to be , the way we interact with the internet has also evolved into a new phase. The internet has transformed from an information gathering and collecting database into a realm with emphasis placed on the internet users’ active participations and the interconnectedness with others online, and from which a greater effect is thereby created. The boom in the recent years with social networks, blogs, micro-blogs and such have linked together information from around the world and allowed contacts between netizens that were previously unfamiliar with each

¹ Wikipedia's definition of Web 2.0 states that: “The term Web 2.0 was first used in January 1999 by Darcy DiNucci.” (see http://en.wikipedia.org/wiki/Web_2.0) Also, Tim O'Reilly and John Battelle held the first Web 2.0 conference in 2004, where they discussed the concept of Web 2.0 and the significance of “internet as a platform”. They believe that all aspects pertaining to Web 2.0 are closely connected to the application and control of collective wisdom.

other. Furthermore, with the rapid pervasiveness with smart phones, people are growing more and more inseparable with the internet. With the mobility of phones comes the constant accessibility to the internet; at any given time, we can check our emails, follow our friends on Facebook, book the next high speed train and send an instant message to notify our family of our plans. Nearly all social activities could be managed by a mobile device, and with the influx of instantaneous feedbacks, we are thereby incited to actively take part in online services and activities. This zeal has also evolved further into modern people's fervent craving to keep track of the "latest information", and the fear of being left out and disconnected has prompted us to maintain the status of being "online" at all times.

Web 2.0 has made it possible for anyone to express themselves online incognito, which spurs for an extremely open environment online for freedom of speech. Countless creativities and thoughts have thus been presented and discussed upon without limitations online. In the past, it required a long and arduous process to become a writer; besides the efforts put in writing, the willingness of a publisher also played a crucial role. However, nowadays, anybody could create and register an identity online to become a blogger, and could freely publish any personal writings online at any time. The title of a writer is thereby easily obtainable. Additionally, the openness of the internet also makes it possible for the readers to leave remarks and suggestions on the blog. This allows the writer to receive instant feedbacks that could aid with the process of self-awareness and become guidelines for adjusting one's work. Therefore, a novel that is published and updated online could go through a process of adjustment based on the feedbacks received from its readers. The readers' participation with the creative process has more or less dictated the direction and outcome of the work.

In the realm of visual art, especially the genre of new media, has also taken a change in the era of the Web 2.0. With the interactive mechanism of the internet, people could stay connected and be involved or participate an online event at all times. This unique characteristic has prompted for changes in the identity of the new media artist. The conventional perception for an artist is that s/he is unique because of the long trainings, unique view points, creativities, and thoughts; s/he is able to express a realm or a state of being that ordinary people may find hard to do. However, with the prevalence of digital tools nowadays, having the skill to manage common digital technology is no longer difficult for most people. Especially with new media, owing to the integration of various media and technical skills, it is increasingly more challenging for the artist to complete the work alone; the different tasks require the participations of experts from various fields. Therefore, new media art could be considered as an aggregation of complex professions, as a collective creative model is taking shape for artists to collaborate with technological professionals from other fields. During the new media art creative process, the artist may take on the role as the leader of the concept; however, s/he may not necessary be able to dictate the final outcome of the artwork. On the one hand, a new media artist may be limited by his/her knowledge on digital tools, which may lead to the situation where the envisioned artwork could not be tangibly realized; hence, a failure occurs. On the other hand, the artist could also be inspired by the technological aid s/he obtains, and the art is able to

apply the technology on a broader and more cultural and aesthetical level. Regardless of which outcome, the collaboration of art and digital technology is full of uncertainties and unexpected outputs.

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The exchanges spurred by collaborations between new media art and various technological and professional disciplines have formed many unforeseen impacts and stimulations. Within the framework of Web 2.0, with the input of the power of the crowd, new media art is able to form connections via social networks, and thus creating bigger impacts to the identity of the artist. The concept of sharing and collaboration on Web 2.0 is also applied by some artists in their art. American music video director, Chris Milk and artist Aaron Koblin's *The Johnny Cash Project* is one such example. This internet-based project began in September 2010. Milk edited lots of footages of the iconic American country rock star, Johnny Cash, for the music video of "Ain't No Grace". More importantly, on the project website, Milk invited internet users to take a frame from the music video as the foundation to re-illustrate an image of Johnny Cash with the specially developed simplified illustration software. The project garnered the participation of 250,000 people within six months and collected an tremendous amount of re-illustrated images, which were used to create several other music videos of various styles. The videos are categorized as "Highest Rated Frames", "Sketchy Frames", "Abstract Frames", "Pointillism Frames", amongst other styles. Furthermore, the netizens could also alter the frames or adjust frames uploaded by others, and could even use the frames contributed by the crowd to remake their own music video for "Ain't No Grave". The simple instructions and also the platform created to offer the users different creative interactive modes made this project a great success, and is a successful example of utilizing "crowdsourcing" as a way to create art.

There are already many cases and projects of commercial or research intents based on the concept of "crowdsourcing". For applying the concept to art, the common model utilized is for one person to make an initiation based on an idea and call out to people online to contribute and complete the work together. However, in order to avoid uncontrollable results, the project initiator would usually set some rules and parameters for the crowd to follow, and the contributors could exercise their creativities under the given instructions.² Within this parameter, the privilege to create art is opened up to the public, and anybody is able to contribute creatively and to become a part of the collective creative process. The so-called "artist" now plays the multiple roles of the planner, initiator, instructor, editor, etc. In this creative process, the artist is no

² Please refer to Aaron Koblin's other collective creative projects from <http://www.aaronkoblin.com/work.html>. His latest project is *This Exquisite Forest* (2012) based on user-generated collaborative animations, which is exhibited online and at Tate Modern in London.

longer in direct control and instead takes on the role as a guide that also becomes a spectator that observes as the artwork takes shape. Therefore, the artist is no longer the sole creator of the work; the work is completed by many unorthodox amateurs. As we can see the credit list on the website of *The Johnny Cash Project* is comprised of many different people, as all the contributors online are now given the title as an “artist”. The previously unreachable status of the “artist” is now accessible to all, and each of the contributors is able to find a sense of achievement from the transient experience of art making. Furthermore, although the works created through crowdsourcing took place in the virtual realm and these contributors may not know each other; however, they are brought together for a mutual goal and a connection is thus formed. This creative approach has enabled greater interactive quality in new media art, with more possibilities allowed for the materials and forms employed for the creative works. Because of the boundless quality of this art genre, good communication and planning skills would be required for the concept initiator, in order to lead and shape the artwork into the intended direction. The “Artist” is no longer able to work alone behind closed doors. To communicate and initiate collaborative contributions have become a necessary mode for executing and achieving the artwork, and through crowdsourcing, the creative expression is able to be developed infinitely. On the other hand, netizens are also able to be transformed into artists through their participation with the creative activities online made possible because of the increasingly accessible digital tools and technologies. Therefore, it is predicted that art making will become a natural part of everyday life, and art is a part of the general public. We can anticipate for this kind of identity transformation and crowd force will no doubt take us into the next phase of cultural development.

2. New Mode of Interaction – Online Community vs. Art Museum

Crowd clout has brought on impacts and changes to the identity of the artist, and art museum, an arena where artworks are exhibited and related researches are conducted, does hold a certain authoritative position, but it is adamant that it must keep up with the current time and reflect upon how to utilize fully the power of collective wisdom. In addition to using social media, such as Facebook, Plurk, Twitter and smart phone Apps for marketing purposes, some museums have also begun to look into crowdsourcing or implement new ways to encourage public participation with exhibitions and creative projects and also using collective wisdom to prompt for new interactive possibilities between the audience and the museum.

In 2008, Brooklyn Museum presented an exhibition titled *Click*, with the subtitle, *A Crowd-Curated Exhibition*. The exhibition was based on an online open call initiated by the museum to seek for photographs related to the theme, *Changing Faces of Brooklyn*, and the contributors could upload the photographs and artwork descriptions to the project website. After the open call concludes, the museum then created an open platform online for netizens to evaluate the submitted works.³ The works were posted anonymously, and the “evaluators” couldn’t see others’ comments as well, as to avoid unbiased remarks. Furthermore, the evaluators were also asked to answer some art related questions, for the purpose of categorizing them into various levels depending on their artistic backgrounds. The answers also became part

of the museums’ research database. Finally, based on the evaluation results, selected works were exhibited inside the museum, whereby the audience could see works that were selected/curated by different groups of people (from art novices to professionals) depending on their various tastes and preferences.

Click is an example of an art museum’s take on crowdsourcing, which has spurred multiple issues between the trinity of art, museum, and crowd, including the release of curatorial authority (the challenge of the curator’s position), independent and public evaluation mechanisms (making the artists and evaluators anonymous, and each person was only permitted to vote once for each piece), differentiation of preferences between elitists and the public (defining the person’s position in the art field), technological issues that a museum may encounter when employing internet tactics, and other issues. Actually, open call of entries and voting are events that commonly take place in museums; however, *Click* used the internet as a medium for artwork contributors and evaluators to voluntarily take part in the process online and which led to the result of the physical exhibition in the museum; all details pertaining to the exhibition content, even the print-out size of the selected works, were all decided by the participating netizens.⁴ Therefore, this exhibition was based on the transfer of curatorial rights from the museum to the public, and for the crowd to co-curate an exhibition that belongs to everyone. However, does this signify that the museum had completely put down its status to embrace the crowd? Were the pieces communally selected suitable to be exhibited in an art museum as works of art? Or was it just a case of “trend-spotting”? Furthermore, does the act of putting forth a submission online constitute the person as a museum worthy artist? These issues continue to be heatedly discussed post the exhibition. *Click* has shown that there are many details that a museum should look into when employing crowdsourcing, such as setting the game rules clearly since the beginning, making a user-friendly event website, and designing marketing ploys to draw people’s contributions. Additionally, although *Click* was a project based on crowdsourcing, but as an effort to avoid influences between individuals, the participants could not download or share the photographic images from the website. In other words, the exhibition, although based on the active participation concept of Web 2.0, intentionally blocked off the common sharing mode of the internet. The design although was intended for the keeping the independent and just attributes of the evaluation process; however, it also acts as a reminder to us that opinions shared online have the potential to create further influences and effects.

Another collective wisdom case applied to museums is *Steve* (*Steve Central: Social Tagging for Cultural Collections* being its complete title). This project was initiated in 2005 due to the limited visitors to the museum’s preexisting online collection database. One of the reasons was that the descriptions posted online were mostly written by professional

³ The call of entries received 389 submissions with 3,344 people took part in the evaluation process. http://www.nytimes.com/2008/07/04/arts/design/04cllc.html?_r=0

⁴ The final exhibition in physical forms at the museum was based on 78 works selected by the masses and printed in various sizes with works that received more votes exhibited in larger sizes. All the submitted works could be viewed online. http://www.nytimes.com/2008/07/04/arts/design/04cllc.html?_r=0

scholars, and the professional language used created a distance from the general public. In order to bridge the gap and for the online collection to be fully utilized and to understand the audience's perceptions and thoughts about the artworks, project Steve was initiated based on the approach of crowdsourcing, whereby visitors of the website could *tag*⁵ and set up keywords for the artworks that they are interested in on the page. This project comprised of 96,867 artworks from 21 museums (including Guggenheim Museum, Metropolitan Museum of Art, Tate Modern, etc...) and received 547,446 keywords online through the contribution of 5,510 users. From the data collected from the project website, it was observed that the general public's descriptions for artworks are very different from those written by art scholars. For example, a guitar collected by the Metropolitan Museum of Art, in addition to words such as "instruments" and "sounds", words that the museum normally wouldn't use to describe and categorize the piece, such as "body", "neck", "left handed", were also submitted.⁶ Also, the word "nice" was widely tagged by the audience for different kinds of works, from paintings, furniture, to garments, and even for a calculator and typewriter. This outcome of the collective wisdom project gave the museums exceptional information to understand how the audience sees and appreciates art and also helped the museums to better categorize their collections. Moreover, the tags also made the prolific online resources easier to use and search for particular pieces.

In this era of increasing individual value, museums can no longer stay high up on a pedestal. More considerations should be conducted to spur for more ways to incite public participation and for collective memories of contemporary art and culture to be co-constructed by the public through these interactions. In addition to using the tremendous power and instant feedbacks from online communities as marketing ploys, museums should also use these channels to allow for more open sharing of knowledge and resources, and for new concepts to also be passed back to the museums, which could lead to better public services. From *Click* to *Steve*, we can see that the interactive mode between museums and the online crowd has entered into a new phase. From exhibitions, collections, researches, and educational purposes, more and more aspects relating to the museum would require the support of collective wisdom. Therefore, the key point for museum and online crowd interaction should be placed on how to create effective "contact", and for each interaction to create a ripple-effect that will continue to spread and garner impacts. It is also critical for a sense of identity and closeness to be formed between the countless netizens with museums. The high walls around art museums should be broken down, and for them to become a true cultural and knowledge sharing platform for everyone.

Conclusion

The impacts digital technology and multimedia have on human culture are immense, and from which, online communities play an integral role. The instant interactions online make us realize that we are not alone. In the past, the simple motive of "I want to do something" is now commonly expressed through participation invitations to others for "let's do

something together". The collaborative process also kindles our desire to create. The coming together of crowd power has the power to incite multiple thoughts and perspectives and to kindle for more possibilities. However, how to find suitable resources and solutions from the massive information provided by the crowd would still require high professionalism, wisdom, and decision making. For a business model, perhaps we could leave the decisive authority to the public and find an appropriate solution to fit the market demand. However, in the field of art, whether or not artists or museums still hold the right to illustrate and define the standard of artistic significance and taste may still be an issue still challenged in this era of collective wisdom. Perhaps more importantly we should consider how to use and lead the crowd in creating a collective aesthetic conscience, while still preserving the unique quality of individuality. Therefore, in this collective wisdom era, the artists may take on a role more like a curator that requires them to take on more tasks of organization and artwork selections and to lead the public creative contributors to strive for the same creative core. As for the art museums, efforts should be put in forming an organic cycling relationship with the artists and the online communities, and in this flowing process, elitist aesthetic contents should be transformed into creative experiences that are fun and close to the general public's life. By brining closer art to everyday life, it will then allow art to be omnipresent through collective force.

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⁵ This form of tagging or categorization by the masses is defined by various terms, such as "social tagging" or "folksonomy", etc...

⁶ Please refer to <http://tagger.steve.museum/steve/object/291?offset=58>

3 Artworks

作品介紹

社群精神 Socialize or Die (Dive)!

剪影留言板 Shadowgram

大家好!

Hello World!

or How I Learned to Stop Listening and Love the Noise

推特心情快照 Twistori

回收追蹤計畫 Forage Tracking

垃圾追蹤計畫 Trash Track

翻越旅行 Hyper Trip

尋找古巴先生 Buscando al Sr. Goodbar

智慧合作社 Wisdom Association

電子羊 Electric Sheep

你也來一筆 Swarm Sketch

台灣金 Taiwan Gold

漫畫接力 Ideogenetic Machine

一萬美分 Ten Thousand Cents

綿羊市場 The Sheep Market

日常片刻 Exquisite Clock

解構 <—> 建構之間 Inter-struction

看展ing Ars Wild Card

面對臉書 Face to Facebook

盯著電腦的人們 People Staring at Computers

匯跳 Rate Beat

社群精神 Socialize or Die (Dive)!

驅策社群媒體不斷發展的原因根源於人類社交／創造關係的慾望，「社群／交關係 (social relationship)」與「科技媒體 (media)」兩項因素交互相乘創造出越來越大的影響力，更多元的對話關係因此被創造出來。

現代社會高昂的社群精神不僅表現在社交網路及社群媒體上，而科技與網絡之外的工具及媒介，更是豐富了各種線上社交圈的可能性。

Diverse dialogues are formed from the two continuously developing forces of “social relationship” and “media”, and with the origin springing from humankind’s desires to socialize and form relationships, the interactions of these two elements are coming together to form increasingly greater impacts in the society.

The rising social spirits contained in society today are not only observed in social networks or media, the tools and means beyond technology and cyber network have also created more possibilities for many diverse social groups found online today.

奥地利电子艺术中心
未来实验室(奥地利)
Ars Electronica Futurelab
(Austria)

2010



剪影留言板 Shadowgram

作品尺寸視空間而定
Actual size of the work depends
on the site

燈箱、牆面、台座、桌子、筆、
貼紙、便利貼、剪影列印機
Light box, wall, podium, table,
pen, stickers, post-its,
shadowgram printer

藝術家自藏
Courtesy of the artist

奥地利电子艺术中心未来实验室所研發的〈剪影留言板〉是社群腦力激盪下的產物，它讓觀眾站在光亮的屏幕前拍照，產生剪影，再把列印出來的縮小照片做成貼紙，黏在一張「地圖」上。各種裝置、機械、機器人的插圖點綴出地圖的樣貌，而剪影上獨特的肢體語言，及便利貼上簡潔的對話框等各種主題性群組，便串聯出一個整體訊息。〈剪影留言板〉在東京、威尼斯及林茲的展出均大受好評。

Shadowgram is a form of social brainstorming developed by the Ars Electronica Futurelab. A person stands in front of an illuminated screen and is photographed. The result is a shadow of his/her silhouette. This picture is then printed out as a miniature sticker and applied to a “map” whose topography is studded with drawings of devices, machines, robots and androids. The particular body language of the silhouette, a speech balloon containing a brief statement, and the respective thematic cluster coalesce into a message. *Shadowgram* was very enthusiastically received at prior showings in Tokyo, Venice and Linz.

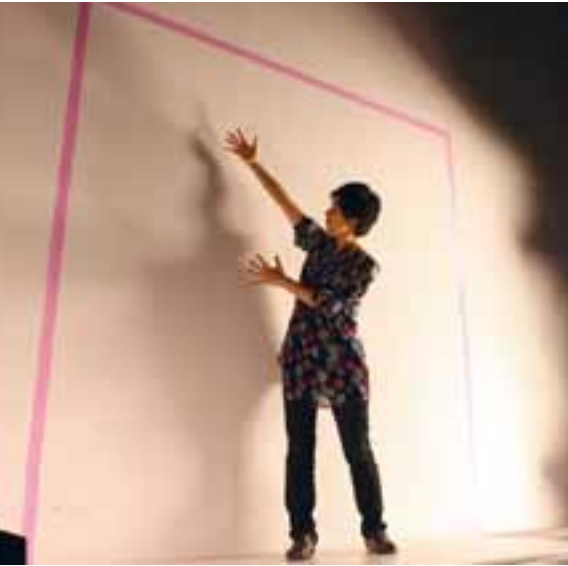


Photo credit: Ars Electronica Futurelab



Photo credit: Ars Electronica Futurelab



Photo credit: Florian Voggeneder



Photo credit: rubra

奥地利电子艺术中心
未来实验室(奥地利)
Ars Electronica Futurelab
(Austria)

2010

作品尺寸视空间而定
Actual size of the work depends
on the site

灯箱、牆面、台座、桌子、筆、
貼紙、便利貼、剪影列印機
Light box, wall, podium, table,
pen, stickers, post-its,
shadowgram printer

藝術家自藏
Courtesy of the artist



Photo credit: Bhoomesh Tak



Photo credit: Bhoomesh Tak



Photo credit: Robertba



Photo credit: Ars Electronic



Photo credit: Ars Electronica Futurelab



克里斯多弗·貝克 (美國)
Christopher Baker (USA)



Hello World! is a large-scale video installation comprised of 5,000 image journal entries gathered online. It takes all the noises created freely online on social platforms and networks, and juxtaposes people's fundamental desire to be heard and understood. Amongst the chatter and clamor, the objective of the piece is to spur for reflection on the issues involved in the phenomenon.

New media such as YouTube allow new information to go viral online, but on the other hand, there is not a new technology that is able to provide us with the ability to listen to all the sounds out there. Each video in *Hello World!* is constructed with a single person facing a group of virtual audience behind the camera, and the person is openly recounting his/her personal thoughts and feelings. The recording took place at places such as the bedroom, kitchen, dormitory, etc. With multi-channel sound manipulations, the individual's sounds are mixed with the sounds coming from the crowd. The audience is left with a confusing situation of trying to focus on listening to the single speaker or to decipher the noises coming from the crowd.

2008



大家好!
Hello World!
or: How I Learned to Stop Listening and Love the Noise

作品尺寸視空間而定
Actual size of the work depends
on the site

〈大家好!〉是一件透過網路蒐集而來、超過5,000個影像日記所組成的大型錄像裝置作品，將時下自由開放、參與式網路平台及社群媒體的喧嘩，與人類最根本想被聽見、被了解的慾望並陳對照，在紛擾的拉扯間提出反思。

新的媒體科技如YouTube，讓新的訊息能以驚人的速度閃現散佈，但另一方面，也沒有任何一項新的科技發明能賦予我們能力去聆聽所有的聲音。作品〈大家好!〉中，每一段影片的結構皆為影片發表者個人面對鏡頭前的虛擬群眾，直率地訴說自我的各種心情，錄影的地點廣如臥室、廚房、宿舍.....等，多頻道聲音處理，將個人與群組的聲音混雜並陳，讓觀眾在專心聽取單獨的聲音，或雜音般的眾聲喧嘩間游移不定。

大型錄像裝置
Large-scale video installation



藝術家自藏
Courtesy of the artist

克里斯多弗·貝克 (美國)
Christopher Baker (USA)

2008

作品尺寸視空間而定
Actual size of the work depends
on the site

大型錄像裝置
Large-scale video installation

藝術家自藏
Courtesy of the artist



艾美·禾伊（美國）
湯馬士·傅胥（奧地利）
Amy Hoy (USA)
Thomas Fuchs (Austria)

2008



推特心情快照 Twistori

作品尺寸視空間而定
Actual size of the work depends
on the site

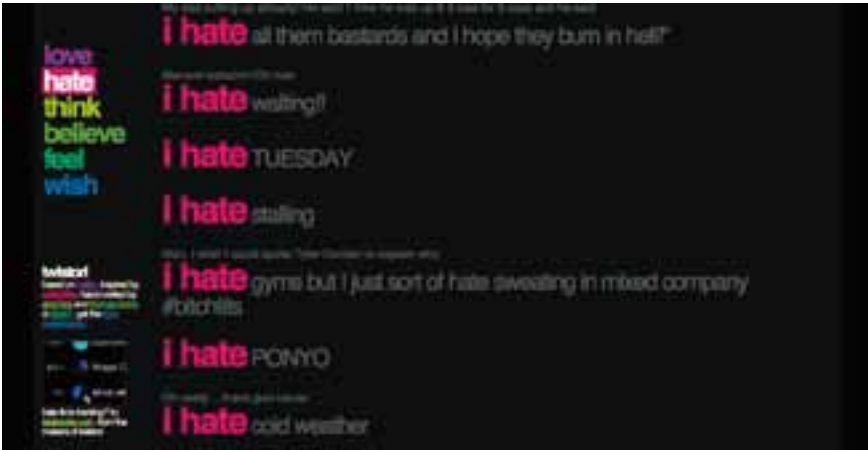
大型錄像裝置
Large-scale video installation

藝術家自藏
Courtesy of the artist

能可貴之境。社群媒體裡流動的百態情緒，串流集結成強大的集體意識，啟發觀者自我投射、甚而引起共鳴、自我認同的交流過程，某處不知名某人的心情快照，彷彿映照出匿名大眾在真實世界裡，沒能說出口的話以及未能表達的心境。而當我們開始進入〈推特心情快照〉將日常中壓抑的心情，以某種虛擬的方式呈現出來，彷彿為這些阻塞在心的詞語找到出口，而透過此交流機制，將自我心情寄之於有形符碼以及不知名的對象的同時，我們也正開啟一部自我對話的心靈紀實。

〈推特心情快照〉是推特(Twitter)社群時代精神的一項實驗，也是推特的第三方應用工具，透過推特搜尋引擎「Summize」將含有「i love(我喜歡)、i hate(我討厭)、i think(我想)、i believe(我相信)、i feel(我覺得)、i wish(我希望)」關鍵字的短文，以不具名的方式在〈推特心情快照〉網站（<http://twistori.com/>）中輪播。

〈推特心情快照〉平台，首先讓使用者感到驚豔的是該網站對於「混合性網路服務」¹的良好運用，但展開網頁的瞬間看到各種心情即景字流，觸動使用者內心視覺與心靈並存的感動，才是〈推特心情快照〉難



Twistori is an experiment inspired by social network interactions on Twitter, and it takes form in a third-party app designed for Twitter. It takes the words “**i love**”, “**i hate**”, “**i think**”, “**i believe**”, “**i feel**”, and “**i wish**” as keywords and through Twitter search engine “Summize” to filter through the users’ tweets and extract tweets containing these keywords, which are then posted on *Twistori*’s website, <http://twistori.com/>.

Twistori is a platform that attracts users with its smooth designs based on the concept of “mashup¹ internet service”. Upon opening up the website, one could see instantaneously streams of words that are moving both visually and emotionally. This is what makes *Twistori* unique.

Amidst the different emotions streaming online via social media, as they are gathered together to form a collective conscience, this spurs for the viewer’s self-reflection and also resonance with the work. Through the interactive process of self-awareness, the posts on *Twistori* from other anonymous people online seem to reflect the inner emotions that people have kept buried inside in the real world. As we enter the world of *Twistori*, let your oppressed emotions from your daily life be released into the virtual realm. Find an outlet for these repressed words. Through the interactive mechanism, transform your inner emotions into tangible symbols and entrusted them to the countless anonymous readers online; open up a soulful documentation based on dialogues with the self.

¹ 混合性網路服務：

又稱「混搭程式」。Mashup 一詞最早出現在音樂上，原先意指藉由混合、搭配不同樂曲與曲風，而呈現出不同的音樂效果；後來這個名詞被應用在Web 2.0上，意指透過結合各種網頁服務，所衍生發展出新的網路服務應用。

¹ Mashup：

The term was first used in music, for the mixing of different musical pieces and styles to present different musical effects. It was later used in Web 2.0 for online services based on the integrations of different websites.

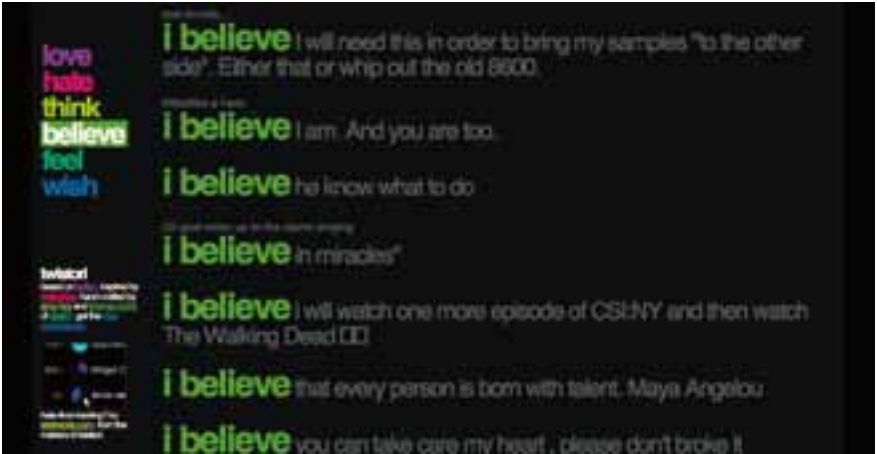
艾美·禾伊 (美國)
湯馬士·傅胥 (奧地利)
Amy Hoy (USA)
Thomas Fuchs (Austria)



2008



作品尺寸視空間而定
Actual size of the work depends
on the site



大型錄像裝置
Large-scale video installation

藝術家自藏
Courtesy of the artist



麻省理工學院感應型
城市實驗室
SENSEable City Lab

2011

作品尺寸視空間而定
Actual size of the work depends
on the site

單頻道投影
Single-channel projection

藝術家自藏
Courtesy of the artist



回收追蹤計畫 Forage Tracking

〈回收追蹤計畫〉反映巴西聖保羅市中心，非官方資源回收者網絡及其組織結構。麻省理工學院感應型城市實驗室在此計畫中使用了全球衛星定位系統、同步語音指示記錄綜覽其流動網絡，智慧型手機APP應用程式對資源回收者提出回收需求，這些資料以及相關的流動管理都由Ushahidi¹ 進行管理，同時也使用此平台與市民相互聯繫。

在此計畫中麻省理工學院感應型城市實驗室與巴西一資源回收聯盟組織COOPAMARE(Cooperativa de Catadores Autônomos de Papel, Aparas e Materiais Reaproveitáveis) 共同合作，企圖增加非官方體制之資源回收組織能見度，並讓大眾深刻認知此組織對於城市所貢獻的服務。在官方回收系統尚未普及運作時，巴西非官方資源回收系統網絡已運作多時，而這些回收者蒐集城市



中回收資源轉賣給企業，作為謀財生存之道，位處於聖保羅市中心的COOPAMARE在其中擔任此運作模式之開創角色。

近來新立的「固體廢物法」，大大地增加了原本非官方回收組織與固體廢物系統緊密結合的可能性，同時也增強其邁向「正式化」之必須性。從前，大多數的非官方資源回收者，使用手推車或卡車在城市中漫遊，找尋其中可能的回收資源，但是這個漫遊收集數百公斤回收物的方式，卻並不具有絕對性的效率報酬，因此，當我們使用全球衛星定位系統以及行動電話時，即可幫助他們建立起一套隱性知識，用以獲得有效率之回收路徑，並建立「資源回收者」與「資源需回收者」之間新的合作關係，而此供需關係亦可對應到資本需求之本質面上。



麻省理工學院感應型城市實驗室（美國）
SENSEable City Lab (USA)



2011

Forage Tracking is a project investigating how the official and informal recyclers in Brazil find and collect material in the city. MIT SENSEable City Lab utilizes location-detecting hardware and software, and smartphone app to connect with these recyclers. The data collected all go through Ushahidi¹, an online platform, for processing management, and the site is also used to connect with people in the city.

This is a collaborative project between MIT SENSEable City Lab and Brazil's COOPAMARE (Cooperativa de Catadores Autônomos de Papel, Aparas e Materiais Reaproveitáveis). The objective is to increase the visibility of non-official recycling organizations and for the public to become familiar with the contributions that these groups have provided to the city. Prior to the operation of the official recycling system, these informal recycling systems have been running for a while already. These recyclers collect materials in the city and resell them to corporations to

earn money. COOPAMARE situated in downtown São Paulo is the pioneer in this kind of operation model.

The new National Policy on Solid Waste has greatly increased the possible integration between these existing informal recyclers and the solid waste system. At the same time, it could also increase the potential for them to become a formal sector. In the past, most informal recyclers roamed around the city with pushcarts or trucks to search for materials to salvage. However, the method they employ of collecting a few kilograms of recyclable materials is not the most efficient in generating returns. Therefore, with the use of GPS system and cellular phones, these tools could help them develop some useful knowledge and help to find the most efficient collecting path. Furthermore, a new collaborative supply and demand relationship could also be formed between the “recycler” and the “recyclable material providers”.

單頻道投影
Single-channel projection

藝術家自藏
Courtesy of the artist



¹ Ushahidi :

為一開放原始碼之平台(Ushahidi.com)，其名源自於非洲肯亞土語「證言」之意，系統建置者透過此平台可提供事件通報與活動通知服務。此平台設置於2008年肯亞，起源於該年初肯亞因選舉所爆發的內戰，當時由志工召集公民們做了報導，而這個「活動」所需的頁面及其功能均來自多國志工之手。Ushahidi由一場「網路活動」開始，首次的活動已為未來的Ushahidi.com完成其必備功能，爾後再將功能分別出來轉換為「引擎」。

¹ Ushahidi :

This word means "testimony" in Swahili. It was a website that was initially developed to map reports of violence in Kenya after the post-election fallout at the beginning of 2008. The original website was ran by volunteers and was used to map incidents of violence and peace efforts throughout the country based on reports submitted by the general public. Ushahidi originated from an "online movement", and the platform developed is opened for use by others around the world.

麻省理工學院感應型
城市實驗室(美國)
SENSEable City Lab
(USA)

2009



垃圾追蹤計畫 Trash Track

作品尺寸視空間而定
Actual size of the work depends
on the site

麻省理工學院感應型城市實驗室的〈垃圾追蹤計畫〉顯示垃圾在城市廢棄物處理系統裡的流向，藉由無線晶片「垃圾標籤」(trash tags)每日向中央伺服器回傳其所在位置，可用來設計更有效率的「移除鏈」(供應鏈的相反)。在西雅圖的一項測試中，實驗室追蹤了2,000多個物品，包括玻璃、金屬與塑膠等資源回收物、充電電池之類的有害廢棄物，以及螢幕等電器。有些物件穿越整個美國、有些最後進入合法正確的終點站，有些則否。

此計畫企圖從結果找出更有效率的廢棄物運輸方式，將二氧化碳排放量降至最低。城市也能利用這些資訊，勸導市民做出更有利於地球永續的消費決定，鼓勵加強資源回收，或正確處理有害廢棄物。

單頻道投影、裝置
Single-channel projection
installation

藝術家自藏
Courtesy of the artist



MIT SENSEable City Lab's *Trash Track* visualizes individual traces of trash objects in the city. With the use of trash tags that report back to the central server the locations of these tagged trash objects, the project is intended to be used for the design of a more efficient “removal-chain” (opposite of the “supply-chain”). During a test conducted in Seattle, the lab tracked 2,000 objects, including recyclable objects made of glass, metal, plastic, toxic wastes such as batteries, and also electronic appliances such as monitor screens. These objects traveled throughout the U.S., and some ultimately ended up at a legal resting stop, while others didn't.

This project intends to find a more effective way to transport wastes and to lower carbon emissions to the lowest possibility. Cities could also use the information collected to educate their people in making consumer decisions that are more sustainable for the future of our planet and to encourage recycling and treatment of toxic wastes in a more appropriate manner.

麻省理工學院感應型
城市實驗室(美國)
SENSEable City Lab
(USA)

2009

作品尺寸視空間而定
Actual size of the work depends
on the site

單頻道投影、裝置
Single-channel projection
installation

藝術家自藏
Courtesy of the artist



翻越旅行 Hyper Trip

當一個人用在網路上的時間越多，留在現實世界裡的時間就越少，虛擬資訊的流通與人際互動早已混搭成為許多人真實生活的一部份，翻轉虛擬與現實的經緯，體驗一場遊走於網線上下、虛實之間的新型態旅行。

The more time a person spends online, the less he/she spends in a real world. Mixing exchanges online and actual social interactions has become a real part of many people's everyday lives. Take a trip that switches the perspectives of the virtual and the real. Take a Hyper Trip and experience a new way of traveling between the realms of reality and virtuality.

蜜雪兒·泰倫(加拿大)
Michelle Teran (Canada)

2010

作品尺寸視空間而定
Actual size of the work depends
on the site

錄像裝置
Video installation

藝術家自藏
Courtesy of the artist



尋找古德巴先生 Buscando al Sr. Goodbar (Looking for Mr. Goodbar)

藝術家蜜雪兒·泰倫組織了一趟漫遊西班牙小鎮穆爾西亞(Murcia)的巴士之旅，不同於一般的觀光巴士，作品〈尋找古德巴先生〉委實是趟現實與虛擬間相互參照、多重翻越的旅行。

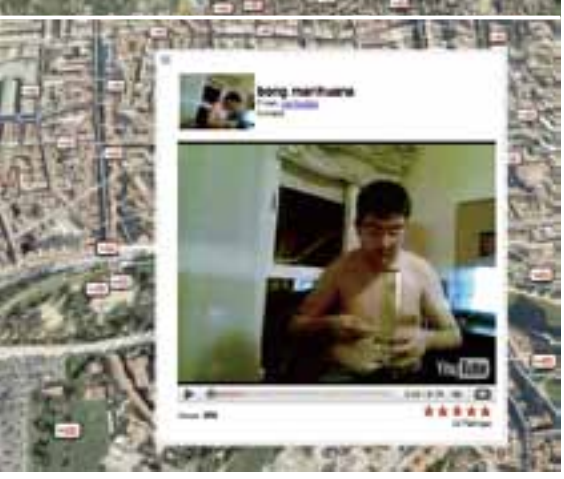
在實際踏上旅途之前，泰倫即先透過Google Earth在虛擬空間中反覆遊覽這座城市，並借助YouTube上在此地發表的相關影片來熟悉該城之常民生活。當巴士穿行於穆爾西亞的大街小巷時，其路線也即時展現在Google Earth的電子地圖上，旅途中若巴士行經處的經緯座標正好與某個YouTube影片拍攝地點吻合，該影片亦立即在車內大螢幕播放。

透過這種方式，巴士上的遊客不僅獲得關於這座城市的印象，同時也透過YouTube接觸到這裡的一些居民：

一個在2分鐘內解開魔術方塊的人、彈鋼琴的年輕人、一群微醺的朋友齊聲歌唱、自學阿拉伯語的某人、陷入愛河的眷侶……等。旅行過程中，有時巴士會停下來，遊客可以實際和一些YouTube影片的拍攝者見面，並在真實的世界中觀看他們重新表演影片中的內容。

如此一來，不僅網路影片與其拍攝地點間建立起某種超越虛實的聯繫，通過實際進入影片拍攝地的所在空間，觀眾和網路世界中的發表者之間更建立起某種親暱的交流，透過此作，藝術家提出對於當代都市語境下，人際社會和媒體網路的交互作用的反思和探討。

本作特別感謝：加拿大藝術委員會。



蜜雪兒·泰倫(加拿大)
Michelle Teran (Canada)

2010

作品尺寸視空間而定
Actual size of the work depends
on the site

錄像裝置
Video installation

藝術家自藏
Courtesy of the artist

Artist Michelle Teran has organized a tour on bus through the Spanish town Murcia. Different from conventional tours, *Looking for Mr. Goodbar* is a journey that mixes reality with virtuality and is comprised of multiple layers.

Prior to embarking on the journey, Teran used Google Earth to view the city online and also watched YouTube videos with footages about people's lives in that town. As the bus traveled in Murcia, the route was also simultaneously broadcasted on Google Earth. If the tour bus happened to pass through a destination that matched the latitude and longitude coordinates of a particular YouTube video, the video was instantaneously played on the screen inside the vehicle.

Through this design, the tourists on the bus were able to learn more about the designated city and also meet some of the residents through their YouTube videos. In the span of just two minutes, they were able to meet someone that solved a Rubik's cube, a young pianist, a group of slightly drunken friends singing in unison, a person self-learning Arabic, and a couple in love. Throughout the trip, the bus stopped from time to time and let the tourists meet in person the people from the YouTube videos and see their performances live in the real world.

With this mechanism, connections that surpass virtuality were formed, as people traveled to the actual spaces where the videos were taken. A more intimate relationship was formed between online viewers and the video uploaders. With this project, reflections and discussions are spurred for issues relating to the contemporary urban setting, people and the society, and the cyber media.

Special Thanks to : Canada Council for the Arts (Conseil des arts du Canada)



智慧合作社 Wisdom Association

網際網路讓資訊整合與交換得以跨越時區與空間的限制，讓集體智慧的鏈結不論在經濟或知識文化的傳遞上，得以快速地產生可觀的群體效益。

The internet has made it possible for information integrations and exchanges to surpass the constraints of time and space, and for the transmission of collective wisdoms of economic or cultural substances to rapidly produce considerable collective benefits.

史考特·德雷弗斯(美國)
Scott Draves (USA)



電子羊 Electric Sheep

1999

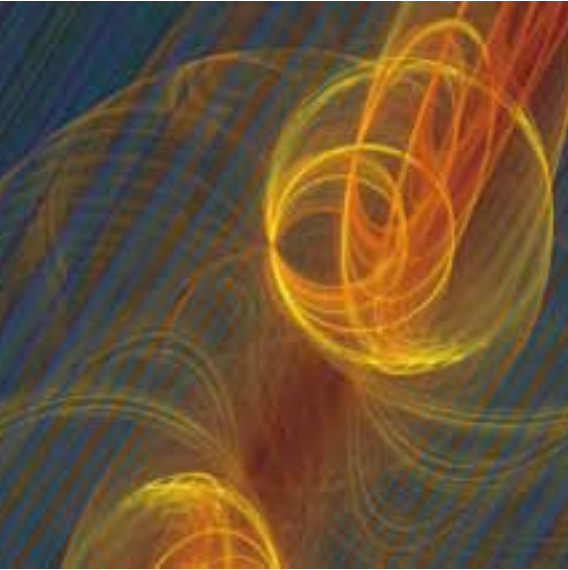
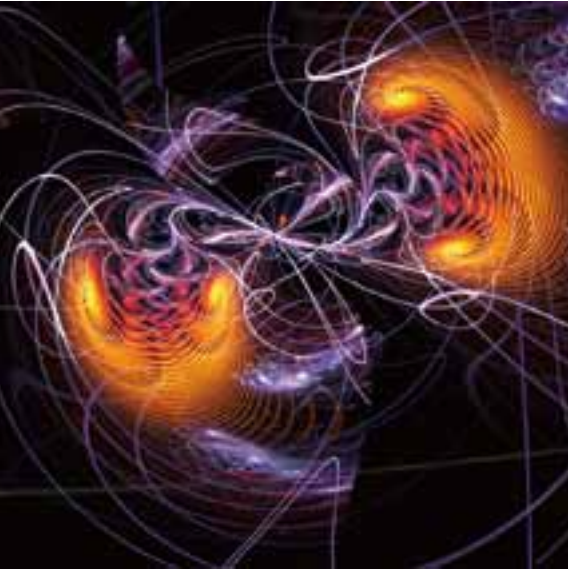
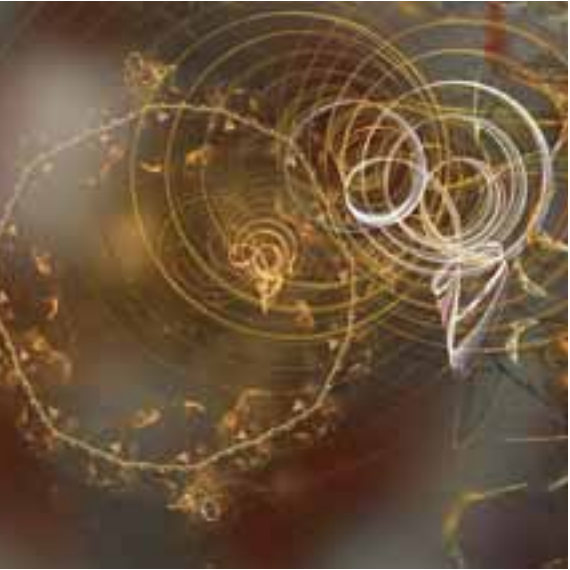
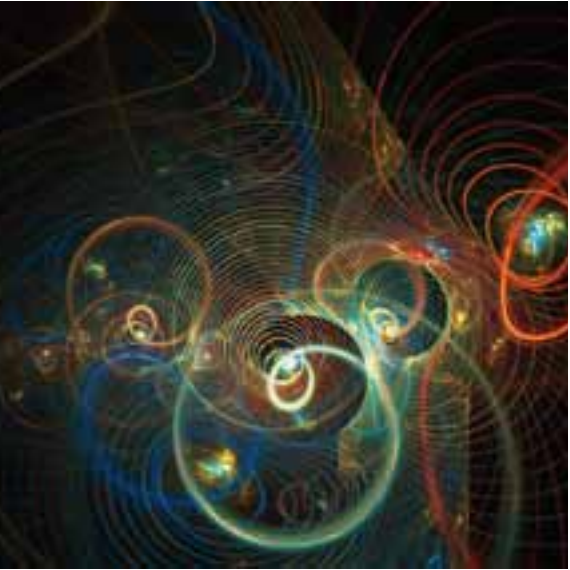
人類與機器間的關係為何？開放原始碼是否為可持續運作創意社群的方式？在這之中我們要如何找到人工與有機體間的分界線？而在這些數位創作中是否含有我們在自然世界中所知的微妙與細緻之處？這些議題都是藝術家史考特·德雷弗斯所關注並企圖研究的方向。藝術家以一個由網際網路分散式四十五萬人與電腦組成的超級電腦所進行的軟體編寫，作為發展其藝術創作之開端。這個演算法資料的第一個版本是從1992年開始，每個圖像均以人造生命形式存在著，並且各別擁有其自身獨有之基因組成，而數以千計的數字則定義其外觀與動作。

集體智慧作品〈電子羊〉¹是藝術家從1999年演化發展至今的創作，作品的系統根自於人人都可下載執行的開放原始碼螢幕保護程式。眾人以電腦協力完成動畫，也就是所謂的「羊」(每執行一個網頁框架需花費一小時，每一秒的動作則費時一天)，大眾透過開放原始碼、群眾外包及投票的方式，提供創意及個人美學。獲得多數票的綿羊們彼此配對，根據遺傳學演算法重新複製，羊群因而形成人類觀眾滿意的模樣。藝術家把受歡迎的版本做成整體設計，便是這件作品的根本。

螢幕保護程式被藝術家當作設計實驗室及設計工廠，既可完成藝術創作，又能收藏限量作品，德雷弗斯挑選出符合自己審美觀的「羊」，經過編輯及重整，以高畫質及慢動作重現，並根據外表、它們的關聯性及主題性，或在藝術家眼中它們所具備的特殊故事性，來挑選他想要的「羊」。

而因著這件作品的銷售收入，可用於支持開放原始碼及伺服器網絡，使藝術家的羊群們可以繼續衍生。透過超級電腦的力量以及人工智慧的技巧，把合成的概念具像化，藝術家的作品得以超越幾何圖形、機械結構，並可超越單一人類創造者能力所及之境。這是數位藝術所少見的極致階段。盼望觀眾在觀看此作之後，能夠以更開放的心胸去感受同身受這台機器與創作。

藝術家自藏
Courtesy of the artist



¹ 電子羊(Electric Sheep)一詞出自於菲利普·狄克(Philip K. Dick, 1928-1982) 於1968年發表之長篇小說《仿生人是否會夢見電子羊?》(Do Androids Dream of Electric Sheep?)而此作於1982年由導演雷利·史考特(Ridley Scott)拍成膾炙人口的科幻電影經典《銀翼殺手》(Blade Runner)。

史考特·德雷弗斯(美國)
Scott Draves (USA)



1999

What is the relationship between man and machine? Is open source a sustainable way to run a creative society? Where is the boundary between artificial and organic? Can digital creations have the subtlety we know in the natural world? These are the issues addressed by this work.

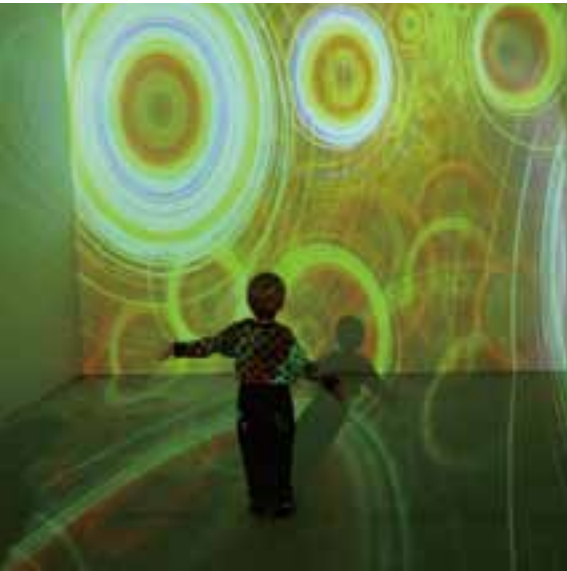
Scott Draves creates his art by writing software that runs an internet distributed supercomputer consisting of 450,000 computers and people. The first versions of this algorithm date from 1992. Each image is a form of artificial life, with its own genome, thousands of numbers that define how it looks and moves.

Scott Draves created this collective intelligence - the *Electric Sheep*¹- in 1999 and it has been evolving and developing since. The system is based on a open source screensaver that anyone can download and run. All the computers work together to render the animations, or “sheep” (it takes an hour to render each frame, or one day of work per second or animation). All the people contribute their creativity and aesthetics, via open source, crowdsourcing, and by voting. Sheep that gain favorable votes mate with each other and reproduce according to a genetic algorithm. Hence the flock evolves to satisfy its human audience. This popular version makes draft designs that are the basis for artist’s fine art.

作品尺寸視空間而定
Actual size of the work depends
on the site

錄像裝置
Video installation

藝術家自藏
Courtesy of the artist



¹ The term “Electric Sheep” originated from the novel by Philip K. Dick (1928-1982), *Do Androids Dream of Electric Sheep?*, which is what director Ridley Scott’s 1982 popular film, *Blade Runner* is based on.



你也來一筆 Swarm Sketch

彼得·愛德蒙 (澳洲)
Peter Edmunds (Australia)

2006

作品尺寸視空間而定
Actual size of the work depends
on the site

錄像、圖面輸出
Video, print-out

藝術家自藏
Courtesy of the artist

Photo credit: 1000 anonymous participants on www.swarmsketch.com over a period of 3 days



photo credit: 1200 anonymous participants on www.swarmsketch.com over a period of 3 hours.



〈你也來一筆〉是一個持續進行的線上塗鴉畫布，藝術家歡迎每個人參與這項集體意識的共同創作，並透過群眾意識一同探索大眾共同創作的可能性。

此作中所強調的「集體意識」特性從「挑選主題」開始，系統每週隨機挑選一線上熱門搜尋語詞為當週繪畫主題，此舉同時意味共同創作者每週創作的主题，皆為依照集體決議所定出的最重要事物。而每新的一週系統亦將自動更新，開始新的繪畫主题，但若當週畫布上已集滿超過1,000筆畫的描繪，則不須等到下週，系統會即刻啟動下一幅〈你也來一筆〉的主题。

每位〈你也來一筆〉的參與者一次只能畫下一筆劃，除此之外，參與者還對於其他已參與者的筆劃擁有投票權，透過每位參與者的投票機制，可以修正其他參與者的筆劃深淺，並且對每一條線的品質提出評論。而我們最終也可由畫面呈現的筆觸深淺度，得知參與者對於該筆畫之評價褒貶與票數。



Photo credit: 1000 anonymous participants on www.swarmsketch.com over a period of 2 days



Photo credit: 1000 anonymous participants on www.swarmsketch.com over a period of 2 days



Photo credit: 1000 anonymous participants on www.swarmsketch.com over a period of 9 days



Photo credit: 1000 anonymous participants on www.swarmsketch.com over a period of 17 hours

彼得·愛德蒙 (澳洲)
Peter Edmunds (Australia)

2006

作品尺寸視空間而定
Actual size of the work depends
on the site

錄像、圖面輸出
Video, print-out

藝術家自藏
Courtesy of the artist



Photo credit: 1000 anonymous participants on www.swarmsketch.com over a period of 12 hours



Photo credit: 1000 anonymous participants on www.swarmsketch.com over a period of 8 hours



Photo credit: 988 anonymous participants on www.swarmsketch.com over a period of 7 days



Photo credit: 1000 anonymous participants on www.swarmsketch.com over a period of 3 days

Swarm Sketch is an ongoing collective online sketching project. The artist invites everyone to participate in the collective sketching of the collective consciousness and to explore the boundless potential made it possible through shared efforts.

The “collective consciousness” the project focuses on begins with the topic selection. A popular search term is selected randomly in the creative system online each week to be used as the sketching topic for that week. This also signifies that the weekly topic for collective sketching is also a result from collective gestures. The project restarts weekly with a new topic; however, if more than 1,000 lines have been drawn on the canvas, the system will also automatically start a new *Swarm Sketch* topic before the week ends. Each contributor could only draw one line, and additionally, the contributors could also vote on the lines drawn by others. Through the voting mechanism, they could adjust the opacity of other lines and leave critiques about them as well. In the end, viewers could tell how each individual line was judged or voted on by looking at its opacity.

白鷺鷥文教基金會
Egret Culture and Education
Foundation



台灣金
Taiwan Gold

2012

作品尺寸視空間而定
Actual size of the work depends
on the site

影像裝置, 網路
Video installation, Internet

藝術家自藏
Courtesy of the artist

〈台灣金〉為白鷺鷥文教基金會於本展期間，透過展覽機制極致發揮本展所提出之「集體智慧」精神，運用集體意識串流的網路介面，將「尋找台灣色彩計畫」¹打破藩籬擴散加溫至台灣全境全民，以「尋找台灣色彩計畫」前所未有的草根性蔓延力量，將潛藏的行為與記憶意識多樣性發揮地淋漓盡致，集結全台極致深度與廣度的集體記憶與意識，號召全民集體智慧尋找台灣代表色彩展現台灣之美，進而讓作品參與者、觀眾均能由此發現台灣文化深厚底蘊。

也因此基金會試圖以各面向及角度探索「尋找台灣色彩計畫」中尚未齊備的台灣代表色，於是基金會從台灣歷史發展軌跡時序，開始尋找這個台灣代表色。狀似「番薯」的台灣島型、自稱「番薯囡仔」的台灣人、滿清據台時期的台灣三寶——「樟腦」、「蔗糖」、「茶葉」、日治時期號稱「香蕉」王國的台灣、同時期獲亞洲第一貴金屬礦山美譽的「金瓜石」；以及從台灣各地看見一大溪「豆乾」、宜蘭「金桔」、北埔「柿餅」、豐原「糕餅」、埔里「枇杷」、奧萬大「楓葉」、嘉南平原「稻浪」、愛文「芒果」、美濃「黃蝶祭」、高樹「鳳梨」、東港美名台灣黑金之「烏魚子」、台東六十石山「金針花

海」，乃至在重要時節扮演重要角色代表生命禮俗之美的台灣色彩——「台灣金」，都是屬於台灣人那段發光的金色記憶。

本作邀集大眾於本展展覽期間使用數位相機或智慧型手機等攝像工具，拍攝心目中帶有台灣文化意涵的「金色」照片，上傳至台灣金官方網站(www.taiwangold.org)，民眾上傳之影像將共同呈現於網站與展覽現場，經由網站系統分析該照片之RGB數值，系統將隨時總和當時上傳所有圖像之RGB數值，待募集活動結束後，系統將統計出每位參與者之RGB總和平均值，而此平均值亦將成為「台灣金」之代表色號，在此募集活動中，每位參與者的參與都將改變色號參數，在這些共同記憶、生活經驗與生命感動中，納眾人智慧的集合函數，尋找集結眾人共創之「台灣金」。

本作特別感謝：財團法人白鷺鷥文教基金會 游鴻春董事長、林艾誼小姐、林錦江董事長；信源企業股份有限公司；財團法人大台北銀行文化基金會；財團法人許遠東先生暨夫人紀念文教基金會；學學文創志業股份有限公司。



Taiwan Gold is a form of “collective wisdom” proposed by the Egret Culture and Education Foundation for this exhibition. An internet interface connecting and forming a “collective wisdom” is used for *The Search of Taiwan Colors Project*¹, as the project breaks boundaries and invites the participation of everyone in Taiwan with an unprecedented grassroots force. Undiscovered behaviors and memories are expressed in a diverse approach and with the integration of the most profound and vast collective memories and conscious in Taiwan, the project calls out to the entire nation to search for the most iconic color to represent a sense of beauty that is distinctively Taiwanese. Through public participation, people are able to discover profound cultures embedded in this nation.

The Foundation attempts to approach *The Search of Taiwan Colors Project* from multifaceted dimensions to uncover the yet to be identified iconic Taiwanese color. Through tracing of the timeline of Taiwanese historical developments, a quest embarks for the search. The shape of Taiwan resembles a yam. Taiwanese people call ourselves “Children of the Yam”. The three treasures in Taiwan during the Ching dynasty’s occupation were “camphor”, “sugarcane” and “tea”; . Taiwan was titled the “banana” kingdom during Japanese colonial era; and during that chapter in history, Taiwan was also referred to as the most precious metal mine for its Jinguashi region in Asia. Furthermore, throughout Taiwan, we can see various regional specialties, such as “soybean curd” of Dasi, “kumquat” of Yilan, “persimmon” of Peipu, "pastry" of Fengyuan, "loquat” of Puli, "maple” of Auwanta, "rice grains” of the Chianan plain, “Irwin mango”, "Yellow Butterfly Festival” of Meinung, “pineapple” of Gaoshu, the precious Taiwan “black gold,” "mullet roe" of Pingtung East Port, and the "sea of daylilies" at Taitung Liushidan Mountain; all of these are important parts in the forming of this vital color of Taiwan that plays essential roles in many aspects of our lives., and this iconic color is Taiwan Gold. Each part of it is a glimmering golden memory of Taiwan.

This work invites the public to use digital cameras or phone cameras to capture photos of the color gold representing iconic Taiwanese culture. By uploading these photos to the Taiwan Gold official website (www.taiwangold.org), the images would be shared online as well as at the exhibition. The analysis system of the website will analyze the RGB values of these photos and constantly update the data collected. At the conclusion of the event, the system will compute the average RGB values from all the photographs received, and this will become the iconic color of Taiwan Gold. Public participation is an integral part for the formation of this color. This process of communal memory and life experience is a collective wisdom, and Taiwan Gold is the outcome of this co-creation.



Special thanks to: Board of Egret Culture and Education Foundation: Hung-Chun Yu, Ai-I Lin, and River Lin; Reliable Source Industrial (RSI); The Bank of Taipei Cultural Foundation; Mr. & Ms. Yuan-Dong Sheu’s Memorial Culture & Education Foundation; Xue Xue Institute.

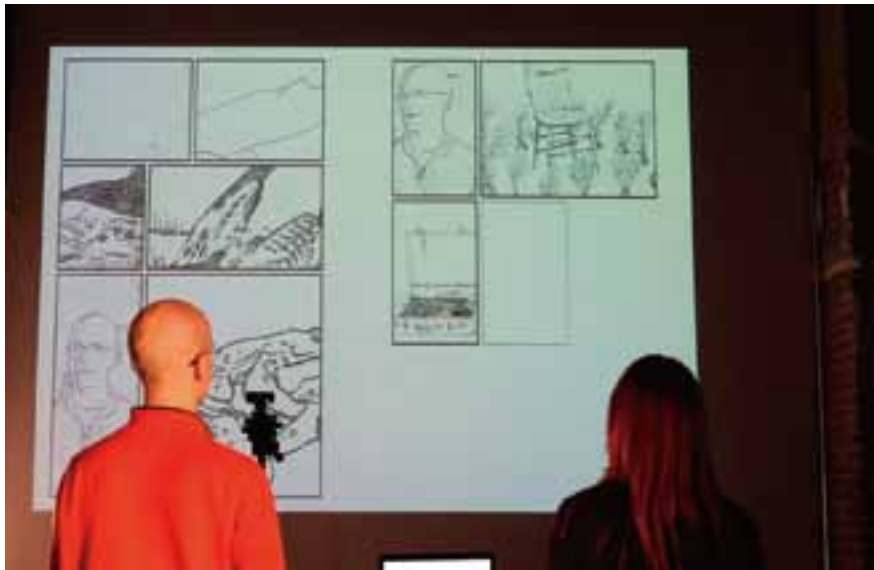


影像裝置, 網路
Video installation, internet

藝術家自藏
Courtesy of the artist

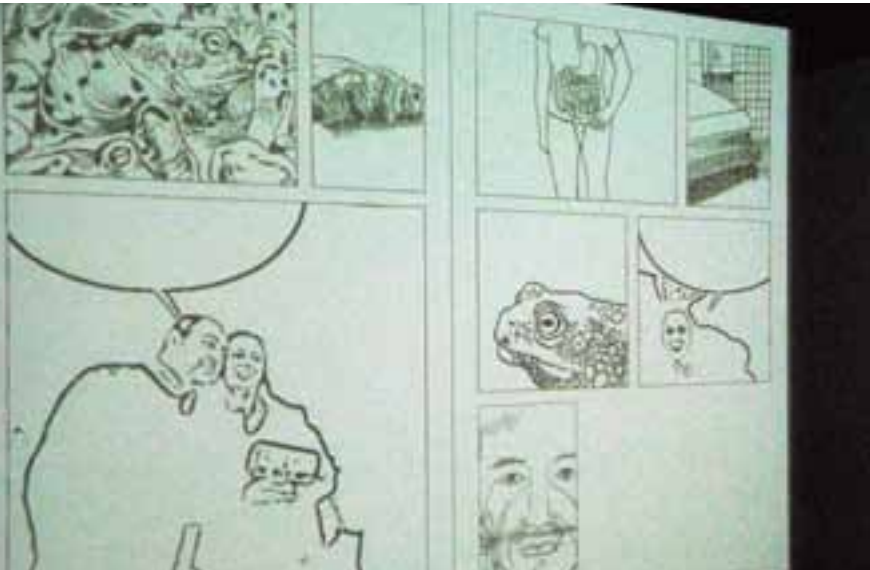
¹ 「尋找台灣色彩計畫」：緣起自白鷺鷥文教基金會榮譽董事長陳郁秀女士任職文建會主委期間，率團遠赴歐洲考察，嘗試以「桃紅色」為出訪概念色，繪出台灣熱情與熱鬧之形象，回台之後透過許多文化創意工作者及相關專家學者之眼、之手、之心，以微觀角度切入，轉化象徵成代表台灣特有的豔光—2004年「台灣紅」(M100、Y10)於此問世。而後，2007年陳郁秀女士更決定為台灣多樣性的自然生態找到其代表色，自空中鳥瞰台灣是綠色的島、藍色的海，而在海陸交界處有一輪清澈鮮明的翠青色，而這充滿青春與活力，代表山川海洋生生不息力量的台灣山水之色「台灣青」(C100、Y50)，如是被發現。

¹ The Search of Taiwan Colors Project: The project began when Egret Culture and Education Foundation's Honorary Chairperson Ms.You-hsiu Chen was serving as the Ministry of Culture Minster. Prior to embarking on an official visit to Europe, Ms. Chen initiated the idea to use the color of hot pink as the representative color of the visit. The objective was to exhibit an image of passion and vibrancy distinctive of Taiwan through the color. Upon returning to Taiwan, through many resourceful and meticulous efforts from people in the cultural creative industry, scholars and experts, this representative image was transformed into a unique icon of Taiwan, as the 2004 "Taiwan Red" (M100, Y10). Since then, in 2007, Ms. Chen initiated another quest to find another iconic color from Taiwan's natural environment. This was how the color of "Taiwan Blue" (C100, Y50) was identified. A color that represents the ceaseless energy in Taiwan's rivers and oceans,it is inspired by the bird's eye view of the green island and blue ocean. It is the pristine vibrant green at the crossing of the land and the sea, symbolic of youth and vitality.



Courtesy of Nova Jiang, technical collaborator: Jake Jefferies

姜小蠻 (紐西蘭)
Nova Jiang (New Zealand)



Courtesy of Nova Jiang, technical collaborator: Jake Jefferies

2011



漫畫接力 Ideogenetic Machine

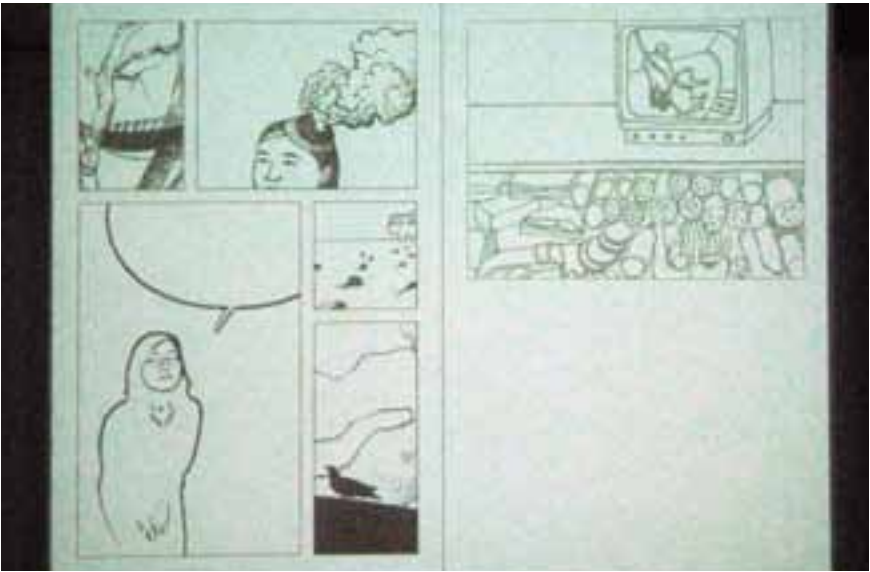
作品尺寸視空間而定
Actual size of the work depends
on the site

〈漫畫接力〉是一件互動裝置作品，歡迎觀眾透過表演與合作，主動參與操縱故事發展。藝術家將照相機設置於展覽現場，觀眾自由地在照相機前擺弄各種姿態、表情，透過照相機所捕捉到的觀眾肖像，將與藝術家的插圖資料庫進行演算處理，而後觀眾的影像會被放置在固定版面中，隨著故事情節的發展而產生相應式互動。此作將因觀眾的持續加入，不斷有機增生嶄新故事與影像版面，漫畫中的畫面不會重複，而這件作品中的軟體同時也在漫畫情節版面中提供空白對話框，可供觀眾日後填入自己創造的對白，於是一本透過觀眾參與而自行衍生推展的漫畫，就此即時地誕生。

互動裝置
Interactive installation

透過此一互動機制，觀眾也從被動接受的觀賞者轉換為積極的參與者，並且頓時化身為漫畫中的主角之一，甚至成為這本獨特漫畫書的創作者。

藝術家自藏
Courtesy of the artist



Courtesy of Nova Jiang, technical collaborator: Jake Jefferies

Ideogenetic Machine is an interactive installation piece based on the audience's performance and collaboration, and their active participation is what drives the story plot to progress. A camera is installed at the exhibition site by the artist, and the audience could freely pose as they wish for the camera. The images captured are processed via the artist's illustration databank, and the audience's images would then be placed inside the preset layout and begin to produce interactive effects alongside the progression of the story plot. As more images are added, new possibilities for the story continue to take place. With no repeated images, this software utilized also provides blank word bubbles for the comic storyboard, and people are able to fill in their own dialogues. This is how this public participatory comic comes to be formed.

Through this interactive design, the audience is transformed from a passive viewer into an active participant, and also becomes a key subject in the comic and even the creator of this unique comic work.

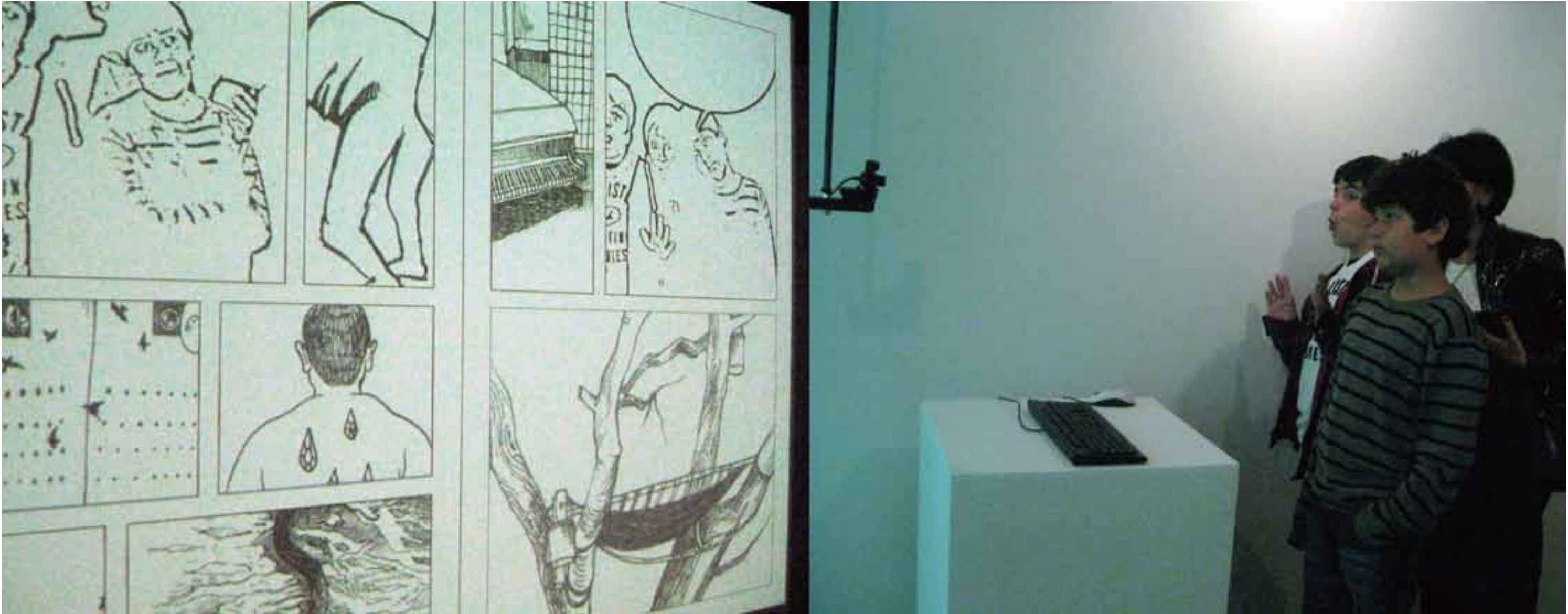
姜小蠻 (紐西蘭)
Nova Jiang (New Zealand)

2011

作品尺寸視空間而定
Actual size of the work depends
on the site

互動裝置
Interactive installation

藝術家自藏
Courtesy of the artist



Courtesy of Nova Jiang, technical collaborator: Jake Jefferies

亞倫·科柏林（美國）
川島 高（日本）
Aaron Koblin (USA)
Takashi kawashima (Japan)

2008



一萬美分 Ten Thousand Cents

作品尺寸視空間而定
Actual size of the work depends
on the site

10,000位匿名工作者所繪製、
客製化之軟體
Customized software and drawn
by 10000 anonymous contributors

藝術家自藏
Courtesy of the artist

藝術家科柏林透過群眾外包（crowdsourcing）¹ 亞馬遜人端運算平台（Amazon Mechanical Turk）²，招募來自世界51個不同國家10,000名工作者，各自使用特殊繪圖軟體，繪製完成一張百元美鈔的一小部分。但當工作者在進行繪製之際並不知道其所繪內容之目的。而最後畫出一張百元美鈔的人力成本(每人所得為0.01美金，0.01美金乘以10,000名工作者)，正好等值於百元美鈔面額。

Through crowdsourcing¹ via the Amazon Mechanical Turk,² artist Aaron Koblin recruited 10,000 contributors from 51 countries using a special drawing software respectively to complete a small portion of a US\$ 100 bill. When these contributors were working on this, they were not aware of the final intention for this artwork. Each section of this US\$ 100 bill was compensated with US\$ 0.01, which totaled to US\$ 100 for the 10,000 people who took part in the project.



¹ 群眾外包 (Crowdsourcing) 一詞是由 Jeff Howe 於 2006 年提出，它的概念是將一些需仰賴人力完成的工作透過特定平台，外包給網路上不特定的自願者，這些工作內容通常具有較瑣碎、大量人力需求、電腦程式難以取代之特性。其運作方式是由委託工作者將原本性質單純、工作量龐大且耗時的任務，切割成相對細小而瑣碎的工作，並且以按件計酬的方式，直接在網路上號召大量有意願的群眾參與。由於外包平台上的參與者多半不具特定專業背景，且多為利用閒暇之餘參與外包工作，索取低廉酬勞。而對雇主而言，相較僱請專人處理，利用群眾外包的多工方式不僅大幅降低成本，且更提升了處理速度，而其完成作品品質亦與專人處理之程度相當。而對於群眾外包的工作者來說，此平台不僅成為一項使用網路並消磨時間的新選擇之外，同時也是增加額外收入的好管道。而亞馬遜人端運算平台亦為目前最廣為使用的群眾外包平台之一。

² 1760 年晚期，一位匈牙利貴族 Wolfgang von Kempelen 創造了第一台號稱能打敗人類的「自動棋奕機器人」。von Kempelen 把它取名為 Turk，它是由一個小木櫃、一副棋盤，以及戴頭巾的人體模型所組成，當時 Turk 在歐洲巡演時大獲好評，但事實上小木櫃中其實躲藏著一位棋奕高手，Turk 看似為劃時代高科技產品，但實際卻是由真實人類智慧所驅動。

亞馬遜人端運算平台 (Amazon Mechanical Turk，簡稱 AMT，<http://aws.amazon.com/mturk/>) 取其名，意謂著亞馬遜公司亦以異曲同工之妙法來運作。委託工作者 (Requester) 將需透過人類智慧方能完成的繁雜任務，切割為細小瑣碎的工作，並在 AMT 平台上設置相關網頁，透過 AMT 提供的指令工具將工作以人腦智慧任務 (HIT, Human Intelligence Task) 形式發佈至外包平台，讓工作者 (Turker) 得以透過存取網頁的方式完成工作。

這些任務大多被設計切割為「短時間內可完成」之內容，每項任務之獲利均偏低，大多落在幾分到數元美金之間。而在此委託任務進行中，委託工作者無庸了解或認識履行該任務之工作者，對於工作者而言，該任務運作方式及目的則是隱密不可見的。

亞倫·科柏林（美國）
川島 高（日本）
Aaron Koblin (USA)
Takashi kawashima (Japan)

2008

作品尺寸視空間而定
Actual size of the work depends
on the site

10,000位匿名工作者所繪製、
客製化之軟體
Customized software and drawn
by 10000 anonymous contributors

藝術家自藏
Courtesy of the artist



¹ The term “crowdsourcing” was coined by Jeff Howe in 2006. It is based on the concept of outsourcing jobs to volunteers found on the internet through specific platforms. The jobs involved are usually more tedious and require massive manual labor that is hard to replace by computer programs. The operation method consists of simple yet tedious and time consuming tasks. They are dividing into smaller segments and outsourced to others that are paid by per unit/project basis. The job is posted online to recruit for a large group of people willing to work on the task. Since the recruited people are usually amateurs seeking to make extra money; therefore, the pay is usually quite low. For the employer, when compared to hiring a professional for a job, crowdsourcing is a more economical way to get works done with greater efficiency. The qualities are comparable to the one executed by a professional. For the people taking on the job, the crowdsourcing platform is not only just a channel to browse around online but also a good channel for generating extra income. Amazon Mechanical Turk is currently one of the most widely used crowdsourcing platforms.

² In the late 1760's, a Hungarian loyalty Wolfgang von Kempelen created the first “chess-playing automaton” that was said to be the first robot to defeat human in the board game. Von Kempelen called it Turk, and it was comprised of a small wooden cabinet, a chess board, and a mannequin wearing a turban. The Turk was positively renowned when touring in Europe; however, a chess master was cleverly concealed inside the chest. The Turk appeared to be an advanced high-tech product, but actually, it was driven by the wisdom of a real person.

Amazon Mechanical Turk (AMT, <http://aws.amazon.com/mturk/>) is named after the Turk, and indicates Amazon is basing its operation model on the same idea. Requester dissects a tedious job that requires the performance of human intelligence into small portions and posts the request on the AMT website. AMT then distributes the Human Intelligence Task(HIT) to the outsourcing platform and let the Turkers acquire the job from the website for completion.

These jobs are usually dissected into tasks that could be completed in a short span of time with compensations that are comparatively low, usually in the range of a few cents to a few US dollars. Therefore during the job outsourcing process, it is not necessary for the requesters to become familiarize with the backgrounds of the Turkers. As for the Turkers, they are oblivious to what the final objective of the job would be.

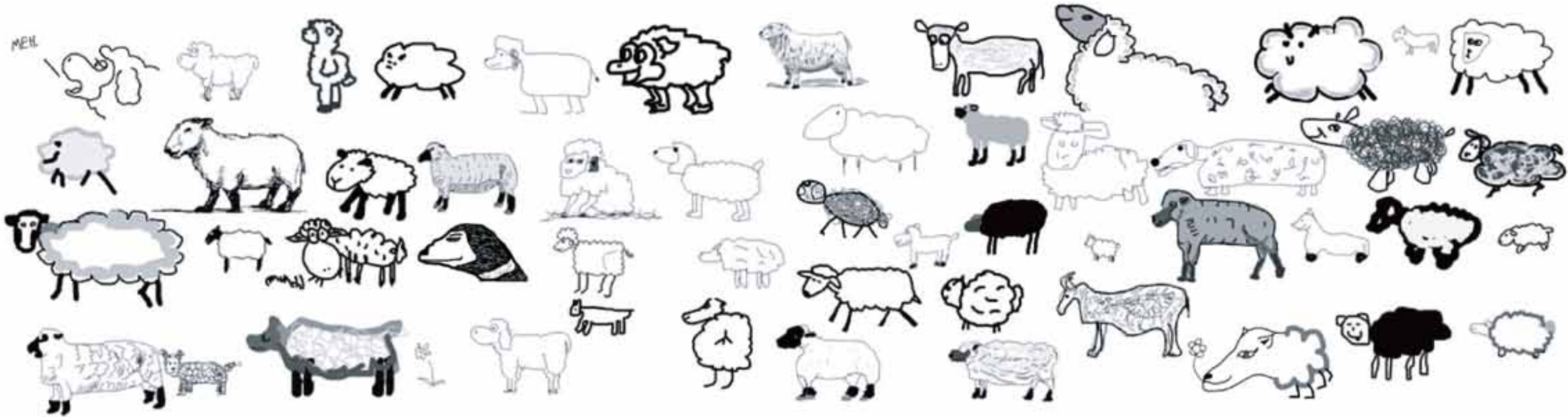


綿羊市場
The Sheep Market

亞倫·科柏林 (美國)
Aaron Koblin(USA)

2006

作品尺寸視空間而定
Actual size of the work depends on
the site

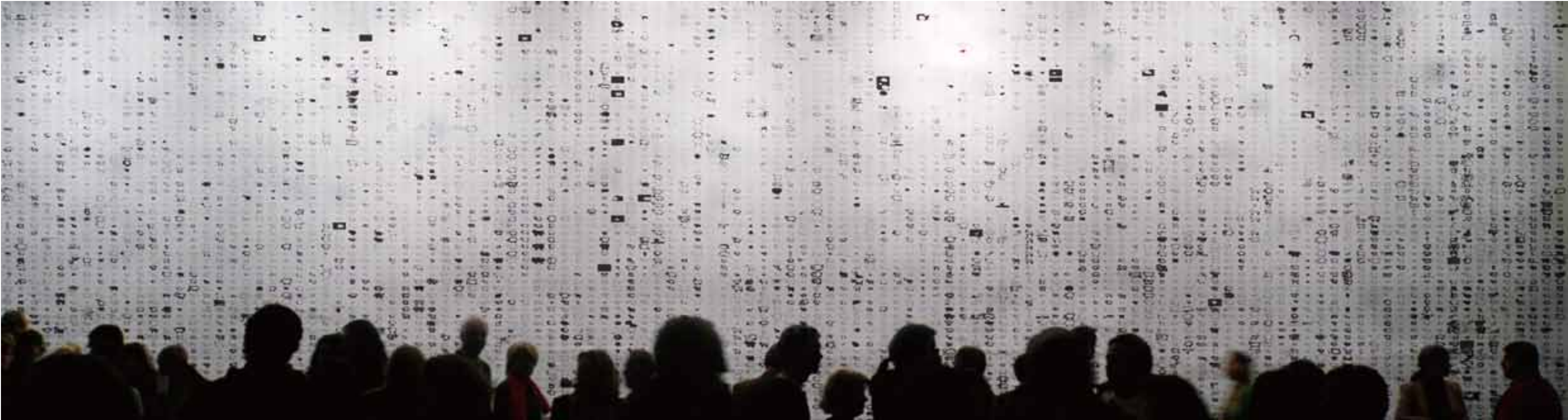


10,000位匿名工作者所繪製、
客製化之軟體
Customized software and drawn
by 10000 anonymous contributors

藝術家自藏
Courtesy of the artist

與亞倫·科柏林另一件作品〈一萬美分〉採用相同創作機制，藝術家再次透過群眾外包亞馬遜人端運算平台 (Amazon Mechanical Turk) 招募工作者。這次的工作指令是繪製一隻面向左方的綿羊，而此項工作費用為0.02美金。這次的綿羊收集工作共耗時40天，工作者平均花費105秒的時間完成繪製一隻綿羊，平均時薪報酬為0.69美金，其間有662隻綿羊遭到拒絕退件，平均一小時可收集到11隻正確完成指令面向左之綿羊。最後集結成一幅眾人合力完成，展現萬種風情的綿羊市場圖。

Similar to *Ten Thousand Cents*, Koblin once again used the Amazon Mechanical Turk for crowdsourcing. The task this time is to draw a sheep facing left. The compensation for the task was US \$0.02. The sourcing of the sheep took 40 days, and each contributor spent an average of 105 seconds in completing one sheep, with the average hourly rate at US \$0.69. 662 sheep were rejected, and on average, about 11 sheep were created according to the direction were collected in an hour. Finally, the image of *The Sheep Market* consisting of 10,000 different sheeps was created based on these collective efforts.



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Benetton's communication
research centre FABRICA(Italy)



2008



日常片刻 Exquisite Clock

作品尺寸視空間而定
Actual size of the work depends
on the site

電視螢幕、播放器、網路、
圖面輸出
TV screen, player, internet,
print-out

藝術家自藏
Courtesy of the artist

作品〈日常片刻〉是一個智慧型手機app應用程式。世界各地的群眾均可透過智慧型手機參與、共享這份創作。〈日常片刻〉鼓勵人們用心感受生活片刻，正如英國詩人威廉姆·布萊克 (William Blake, 1757-1827) 《天真之歌》中所言：「一沙一世界，一花一天堂，掌中握無限，剎那即永恆」，用真切的心感受周遭、發掘隱藏其中妙趣。參與者從日常生活各項人事物中微觀尋索0~9數字造型，顯而易見者如鈔票、報紙日期、電話、門牌上之數字，隱晦者如衣服摺疊、電線捲曲、膠捲曲度、肢體樣態，透過這件作品我們發現美景旨趣俯拾即是，一切有待人們的發掘與發現。當參與者尋獲生活中數字造型後，運用智慧型手機上傳，影像將即時儲存運算、更新圖像資料庫。〈日常片刻〉集眾人之力，使報時畫面充滿圖像的視覺趣味，同時也模糊了藝術家、創作者、生產者與消費者間的身份界線，讓世界各個角落的匿名大眾，透過網站與app相互產生連結。



Exquisite Clock is a smartphone app. People from around the world could use this app to take part and share creatively. *Exquisite Clock* encourages people to take time to experience the small details in life. The concept is similar to British poet William Blake's (1757-1827) *Auguries of Innocence*, "To see a world in a grain of sand, And a heaven in a wild flower, Hold infinity in the palm of your hand, And eternity in an hour." Feel what's around you wholeheartedly and you might discover pleasant surprises that have been hidden before. Participants are asked to discover shapes and forms in their everyday lives that resemble the numbers 0~9, such as on money, newspapers, telephones, house numbers, or the less obvious ones hidden in folded clothes, cable coil, tape roll, body posture, etc. Through this work we are able to discover interesting things in life's small details. When a user has discovered a number, s/he could take a photo of the image and upload via his/her phone. The image would be processed and uploaded to the virtual clock's image database. *Exquisite Clock* is a collective endeavor, and makes the mundane task of telling time a fun visual project. It also makes less distinct the roles of the artist, creator, producer, and consumers. People all over the world are able to connect with each other through the internet and the app.

喬奧·恩力克·韋爾伯特 (巴西)
班尼頓集團傳播研究中心
FABRICA (義大利)
João Henrique Wilbert(Brazil)
Benetton's communication
research centre FABRICA(Italy)

2008

作品尺寸視空間而定
Actual size of the work depends
on the site

電視螢幕、播放器、網路、
圖面輸出
TV screen, player, internet,
print-out

藝術家自藏
Courtesy of the artist



Photo credit: Guy Archard



Photo credit: Oriol Ferrer Mesia

解構<—>建構之間 Inter-struction

虛擬空間中變換不定的主體和社群，在鬆動固有社會關係的同時，又能透過有機解構的過程建構起新的可能性與鏈結。

The core body and communities in the cyber space are constantly changing. While demolishing the inherent social relations, it also enables the construction of new possibilities and links through the process of organic deconstruction.

奧地利電子藝術中心
未來實驗室(奧地利)
Ars Electronica Futurelab
(Austria)

2011



看展ing Ars Wild Card

作品尺寸視空間而定
Actual size of the work depends
on the site

印表機、電腦、相紙
Printer, computer, photo paper

藝術家自藏
Courtesy of the artist

作品〈看展ing〉是智慧型手機app應用程式，參觀者透過這個系統，與參展作品及展場產生即時的親身互動，享受當下位於展覽公共空間的同在感。在與〈看展ing〉合作的展覽中，其參展作品都會有一個專屬的QR code，觀眾透過智慧型手機掃描作品QR code後，在手機上隨即產生該作品的專屬相框，在這個相框內觀眾可以為該作品拍攝照片，或邀請朋友一同與作品合影，當然您也可選擇為自己與作品合影，並留下自己的評論。而這張照片將會透過智慧型手機儲存到雲端的服務系統內，其中部分影像也會被分享到社群媒體網路(<http://awc.aec.at/>)。



Photo credit: 장성경

Ars Wild Card is a new smartphone app which enables visitors to enjoy exhibitions in public space. Using the app, visitors can capture a QR code beside each work and access a frame that reveals information about the work. Within this frame the visitor can photograph the work, including themselves, friends and family to record their experience of the work. The photos are stored on their iPhone and can be shared to a cloud service and optionally shared via social media networks (<http://awc.aec.at/>).



Photo credit: 1st row: asami, Anna, Agnes; 2st row: Emiko, Emiko, Dynamic Creative Lab; 3st row: 孫子, 閔민영, Emiko; 4st row: Sunset janghang, Sealedbeam

概念：奧地利電子藝術中心—小川英明、小川繪美子、曼努艾拉·納弗
軟體研發：迷因股份有限公司(迷因研究中心)
設計：史蒂芬·艾伯溫默
A project by Ars Electronica (Hideaki Ogawa, Emiko Ogawa, Manuela Naveau)
Software development by Memetics GmbH
Design by Stefan Eibelwimmer

奧地利電子藝術中心
未來實驗室(奧地利)
Ars Electronica Futurelab
(Austria)

2011

作品尺寸視空間而定
Actual size of the work depends
on the site

印表機、電腦、相紙
Printer, computer, photo paper

藝術家自藏
Courtesy of the artist



Photo credit: Johannes Ramsil

亞歷山卓·路多維可（義大利）
保羅·奇理歐（義大利）
Alessandro Ludovico (Italy)
Paolo Cirio (Italy)



面對臉書
Face to Facebook

2011

作品尺寸視空間而定
Actual size of the work depends
on the site

複合多媒體裝置
Multimedia installation

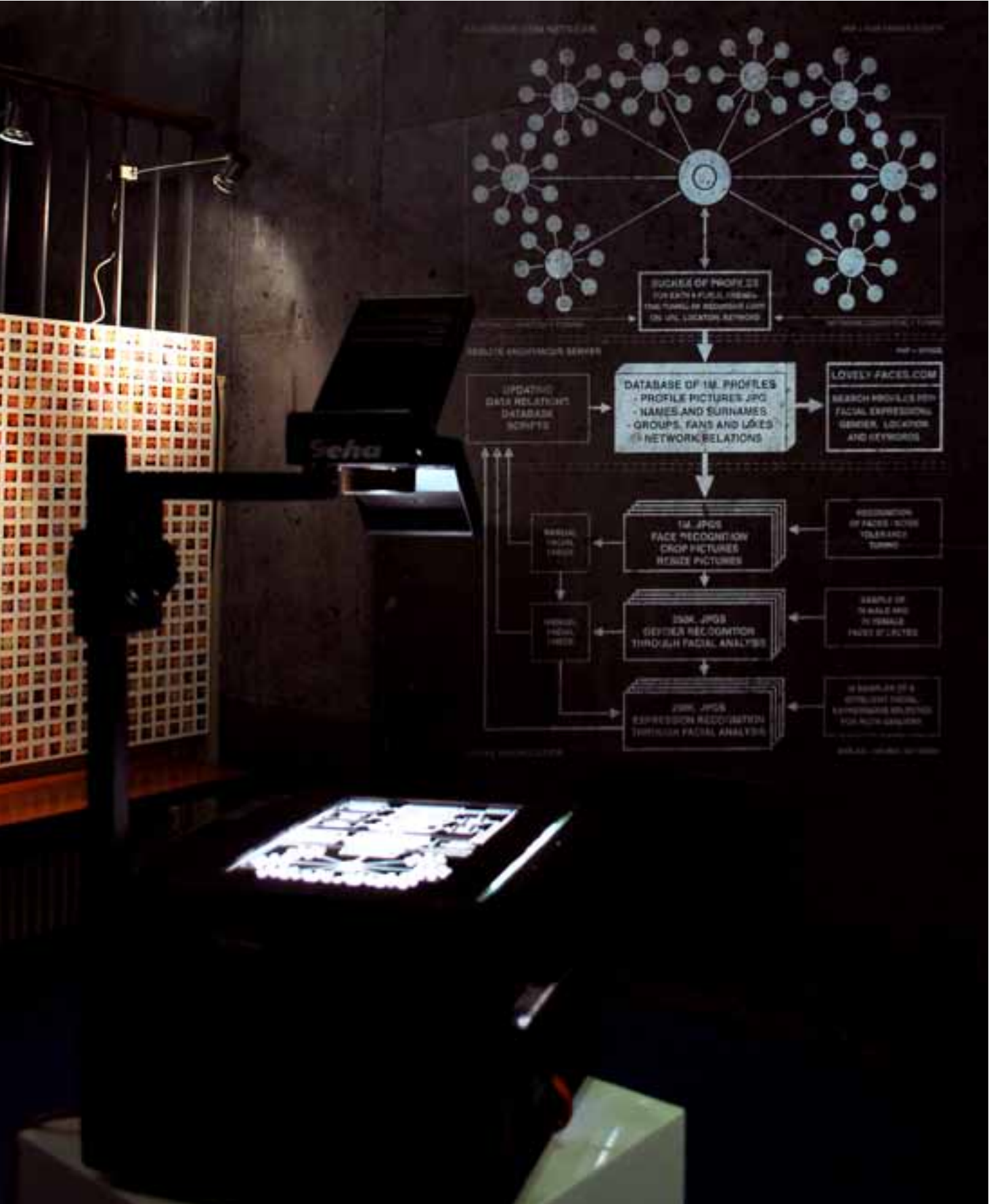
藝術家自藏
Courtesy of the artist

「用戶個人資料保密安全性」及「隱私權」一直是網路使用者熱門討論的議題，尤其一些使用者每日長時間使用的搜尋與社群網站，常因其「有爭議性地獲取及售出用戶資料」而遭到網路使用者質疑，時而會有爭議事件發生、平息、再發生、再次平息，而每次的事件過後大多數的使用者均選擇「繼續」使用這些網站，因為每個人都在使用，以至於使用者很難去抵制這些網站在各自市場中佔有的壟斷性與權威性。

而作品〈面對臉書〉就是針對此議題，向操控著全球數億用戶資料的臉書，作出主動反擊的動作，藝術家針對臉書的保安漏洞，竊取複製用戶帳號，再運用臉部辨識軟體，分析過濾這些帳號的個人肖像，挑選其中二十五萬名用戶的簡介資料，根據電腦分析各個不同表情並進行分類，而後再公佈到藝術家架設的交友網站「可愛的臉(lovely-faces.com)」，該網站使用者可根據搜尋性格與喜好，來找到心儀對象的臉書資料。藝術家於「柏林跨界媒體藝術節2011(transmediale11)」展出此作之時，記錄各界對於個人資料外洩以及盜用帳戶的反應，有些人感到憤怒，但也有些人表示樂見

自己被放在交友網站中，而其中反應最大的莫過於臉書公司，目前臉書公司已採取法律途徑提告這兩位藝術家，並永久刪除兩位藝術家的臉書帳號，而「可愛的臉」業已關閉。

2011年〈面對臉書〉獲得奧地利電子藝術節「互動藝術」類大獎，在獲獎藝術家研討會中，談及現今的「互動」定義不再是觀眾以按鈕與電腦介面產生互動，這件作品以更宏觀的觸角來闡述及發生互動，〈面對臉書〉以查探系統漏洞，來引發社會回應作為互動。藝術家一方面企圖讓臉書中虛擬的大眾，打破系統限制與社交規則，在這個新的共享空間中更自由地展現自己。另一方面，針對數位極權主義，透過藝術行動提出對抗，揭示出身為媒體霸權的臉書，其用戶隱私安危漏洞，作品運用媒體與廣大用戶的群眾力量迫使臉書面對問題。奧地利電子藝術節為期一週的強力媒體曝光及事件快速發酵，讓這件作品/行為成為一場全球性大型媒體駭客的精彩演出，實踐駭客精神以及文化行動主義。



亞歷山卓·路多維可（義大利）
保羅·奇理歐（義大利）
Alessandro Ludovico (Italy)
Paolo Cirio (Italy)

2011

作品尺寸視空間而定
Actual size of the work depends
on the site

複合多媒體裝置
Multimedia installation

藝術家自藏
Courtesy of the artist

“Personal information protection” and “privacy” are issues constantly discussed heatedly amongst internet users. Some popular search engines and social network sites have also been caught in the controversy of selling out user information. It is a cycle that happens over and over, and as the dispute dies down, many users still choose to “remain” using these sites because everybody else is still using it. This phenomenon is making it difficult for users to fight against the monopolistic and authoritarian powers that some of these websites hold in the market.

Face to Facebook is a work that deals with these issues and attempts to fight back at Facebook, a site with hundreds of millions of users globally. Utilizing the security loophole at Facebook, the artists scraped information from Facebook accounts, and filtered them with a face-recognition software to categorize portraits stolen from these accounts. 250,000 users were then selected and uploaded to a dating site, lovely-faces.com, that the artists have created and were sorted by their facial expression characteristics. Users of this site could search for people who attract them according to their personalities and preferences as indicated on their Facebook pages. When the artists unveiled this project at Transmediale11, some people were angry that their information have been leaked and exploited, but there were also others that were happy to see themselves posted on a dating site. Of course Facebook was not happy about this, and has consequently taken legal actions against these two artists. The artists’ Facebook accounts have also been permanently deleted, and the site lovely-faces.com has also been shut down.

Face to Facebook won Prix Ars Electronica 2011 for the genre of Interactive Art. The definition of “interactive” was discussed at the awarded artists’ symposium, as the genre is no longer defined by interaction prompted by the audience pushing a button and computer interface to spur for interaction. This artwork is based on a broader perspective of interaction, as it investigates system loopholes and causes social responses as an interaction. On the one hand, the artists wanted to bring the virtual public on Facebook into a new shared space to express themselves in a freer manner and to break system restrictions and social conventions. On the other hand, it targets digital totalitarianism, and through the protest via art to expose Facebook’s role as a media hegemony and how it puts its users’ privacy in danger. The work uses media and public power via Facebook users to force Facebook to face the problems at hand. Ars Electronica also raised the project’s visibility through a week-long media exposure and helped the work to go viral. This artwork/action became a grand-scale global media hacking demonstration, and is an example of true hacker



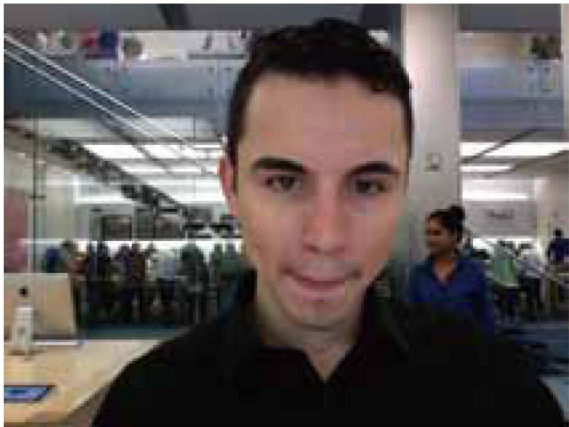
凱爾·麥唐納 (美國)
Kyle McDonald (USA)

2011

作品尺寸視空間而定
Actual size of the work depends
on the site

錄像裝置
Video installation

藝術家自藏
Courtesy of the artist



盯著電腦的人們 People Staring at Computers

藝術家麥唐納在美國紐約數間蘋果電腦專賣店(Apple Store)中，約100台的Mac電腦展示試用機上安裝間諜拍照軟體，該軟體讓電腦每分鐘自動拍攝一張電腦試用者照片，並向指定的遠端伺服器發送。由於蘋果電腦專賣店每晚會卸載所有安裝在店內展示機上非原裝軟體，因此藝術家需要每天重回店內，再次安裝該軟體。

作品〈盯著電腦的人們〉，擷取都市人在使用電腦時的表情神態，這件作品不僅展示了普遍大眾使用電腦時的神情，假想若電腦本身也賦有生命，那麼電腦上的攝影鏡頭就是電腦的眼睛，透過這雙眼睛藝術家模擬了電腦利用鏡頭，欣賞我們(電腦使用者)如何盯著它們瞧的樣態。藝術家將所收集到的這些電腦使用者照片，彙總編輯成一段短片。此創作計畫公佈後，藝術

家的家裡隨即遭到秘密特務人員的搜查，並且被沒收了藝術家五項物件，它們分別是兩台電腦、一台 iPod、一個USB隨身碟，以及一張相機記憶卡，並被告知蘋果公司將再與他聯繫。

此藝術計畫與其後續的議題發酵揭示了公共空間與私人隱私的分野與問題，被攝者的影像皆在公共空間內取得，所以「拍照」這項行為並不需要得到允許。藝術家在計畫開始之初，更曾在蘋果零售店店頭詢問保安人員是否能在店內攝影，並詢問顧客是否願意被拍攝照片，在取得所有被詢問者同意後，才開始進行這項計畫。



Artist Kyle McDonald went to some Apple retail stores in the U.S. and secretly installed an application on Macs that would snap a photo using the Mac's built-in webcam every minute and uploaded photos if a face of an unsuspecting customer was detected. Because Apple retail stores uninstall added softwares on their computers nightly; therefore McDonald had to go back to the stores to reinstall them daily.

People Staring at Computers captures urban dwellers' facial expressions as they stare at computers. This work not only shows the look people have when using computers, and if the computer were alive, the webcam would be its eyes. Through these eyes, the artist simulated how the computer through the webcam observed us (the computer users) staring at it. The photos collected were made into a short video. After the unveil of the project, the artist's home was searched by secret agents, with five items belonging to the artist confiscated, and they were two of his computers, one iPod, one USB drive, and a camera memory stick. They also informed him that Apple would be in touch with him.

This art project and the proceeding incidents deal with the boundary and issues between public space and individual privacy. The photos were all captured in public; therefore, permission was not needed for one to take photos. Prior to conducting this project, the artist even asked the security at one of the Apple retail stores if he could take photos there, and also asked the customers if they were willing to have their photos taken. Upon obtaining permissions from them, he then proceeded to carry out the project.





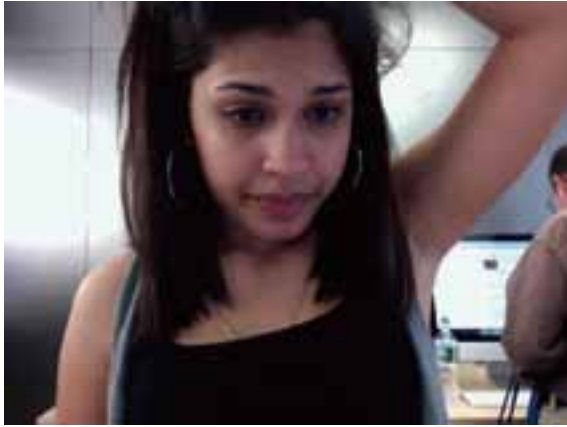
凱爾·麥唐納 (美國)
Kyle McDonald (USA)



2011



作品尺寸視空間而定
Actual size of the work depends
on the site



錄像裝置
Video installation

藝術家自藏
Courtesy of the artist

純粹是：
紀子衡、卓立航、
李季穎、林廷達 (台灣)
Purels:
Tzu-Heng Chi, Li-Hang Cho,
Chi-Ying Lee, Ting-Ta Lin
(Taiwan)

2011



匯 跳 Rate Beat

作品尺寸視空間而定
Actual size of the work depends
on the site

作品〈匯跳〉使用電磁鐵讓瓶子內的錢幣跳動，並與網路上的匯率做即時線上連結，使錢幣在瓶中翻滾產生出獨特的聲音。

「匯跳」取諧音「會跳」，試圖提問「匯跳」與「會跳」，是誰比較會跳？每分每秒如瓶中錢幣活潑蹦跳的匯率，因幣值匯率漲跌而浮跳的人心，作品〈匯跳〉牽引出另一條刺激跳動的心靈脈動。

電腦、瓶子、各國錢幣、
電磁鐵
Computer, bottle, coins,
electromagnet

天真、快樂、感動、熱情全被現實的聲音所蓋過，空洞的軀殼僅存的是那「比較」的心態。人類喜歡聽到那清脆跳動的錢幣聲，卻討厭機械式的工業聲響，唯美表面的背後並不完美。

藝術家自藏
Courtesy of the artist



Rate Beat uses electromagnet to make coins inside a bottle jump, and the piece is linked simultaneously to the currency exchange rate online, whereby the coins inside the bottle are prompted to jump and make different sounds.

In Chinese, the term for “exchange rate increase” sounds phonetically similar to the term “able to jump”. So which is a better jumper? With the coins inside the bottle hopping up and down constantly, it symbolizes people’s uneasy state of mind with the unstable currency rate. Additionally, *Rate Beat* is also about the excitement and rhythm of one’s internal beats.

Innocent, joyful, touching, passionate emotions are constantly overwhelmed by sounds in a real world, and what is left in the empty shell is people’s sense of “competitiveness”. People like to hear the crisp sounds of coins jangling, but usually hate the booming sounds of industrial machines. Behind what appears to be perfectionism is usually something less than perfect.

純粹是：
紀子衡、卓立航、
李季穎、林廷達 (台灣)
Purels:
Tzu-Heng Chi, Li-Hang Cho,
Chi-Ying Lee, Ting-Ta Lin
(Taiwan)

2011

作品尺寸視空間而定
Actual size of the work depends
on the site

電腦、瓶子、各國錢幣、
電磁鐵
Computer, bottle, coins,
electromagnet

藝術家自藏
Courtesy of the artist



4

Biographies

簡歷

藝術家簡歷 Artists' Biographies

社群精神 Socialize or Die (Dive)!

奥地利電子藝術中心未來實驗室（奥地利）

奥地利電子藝術中心未來實驗室是新型態的媒體藝術實驗室，透過藝術及科技的創新交互產生靈感。實驗室團隊藉由學科的交叉整合及國際化的網絡合作，集結各類專長，跨足設計、策劃展覽、藝術裝置創作，亦與大學合作研究、私人企業機構合資等等。

重要獲獎記錄

- 2011 奥地利凱薩獎
- 2006 德國數位藝術獎
- 2005 奥地利世界高峰獎
- 奥地利國家多媒體及電子商業獎，促進經濟與就業
- 2003 奥地利阿道夫·魯斯國家獎
- 奥地利Oberösterreichischer Zukunfts獎
- 2002 奥地利林茲Kunstwürdigungs獎
- 2000 奥地利電子藝術大獎

Ars Electronica Futurlab (Austria)

The Futurelab is a model of a new kind of media art laboratory in which artistic and technological innovations engender reciprocal inspiration. The teams of the lab bring together a wide variety of specialized skills; their approach is characterized by interdisciplinarity and international networking. The Futurelab's wide-ranging activities include designing and engineering exhibitions, creating artistic installations, as well as pursuing collaborative research with universities and joint ventures with private sector associates.

Selected Awards

- 2011 CAESAR, Austria
- 2006 Animago Award, Germany
- 2005 World Summit Award, Austria
- Staatspreis Multimedia und e-Business des BM für Wirtschaft und Arbeit, Austria
- 2003 Adolf-Loos-Staatspreis, Austria
- Oberösterreichischer Zukunftspreis, Austria
- 2002 Kunstwürdigungspreis der Stadt Linz, Austria
- 2000 Prix Ars Electronica, Austria

克里斯多弗·貝克（美國）

個展

- 2010 「位元時光飛逝」，通訊美術館，伯恩，瑞士
- 「第二階段系統化」，米勒共同創作，科羅拉多大學當代藝廊，科羅拉多泉，美國
- 「大家好！」，視覺工作坊，羅徹斯特，美國
- 「當下……」，艾德曼分部，紐約，美國
- 2009 「藝術新秀展覽」，法蘭克林藝術工作坊，明尼亞波尼，美國
- 2007 「對話3：貝克+史都華」，昆西街藝廊，明尼亞波尼，美國

聯展

- 2012 「交叉線」，艾文斯頓藝術中心，芝加哥，美國
- 「發光數據：把影響世界的資訊視覺化」，紐澤西大學藝廊，愛文，美國
- 「零1雙年展」，聖荷西，美國
- 「智慧多媒體藝術節」， 開放概念藝廊，湍流市，美國
- 「2012 CHI」，奧斯汀，美國
- 2011 「#是訊息嗎」，康斯特藝術實驗室，德芬特，荷蘭
- 「邁阿密眼界」，眼界基金會，邁阿密，美國
- 「網路化」，Alta科技協會，利馬，秘魯
- 「社群媒體」，佩斯藝廊，紐約，美國
- 「虛擬身分」，斯特羅奇宮當代文化中心，佛羅倫斯，義大利
- 「第二生命：面具遊戲與另一個我」，盧森堡當代美術館，盧森堡
- 「北極火花」，北極光藝術中心，明尼亞波尼，美國
- 「偶然值」，UTS藝廊，雪梨，澳洲
- 「Ososphere藝術節」，史特拉堡，法國
- 「人類，以電腦之名」，長毛象藝廊，洛杉磯，美國
- 「萬物即時」，書籍藝術中心，紐約街區，美國
- 「The Block」，昆士蘭科技大學，布里斯本，澳洲

Christopher Baker (USA)

Solo Exhibitions

- 2010 "As Time Goes Byte," Museum für Kommunikation, Bern, Switzerland
- "Systematizing Part 2," Gallery of Contemporary Art, USA
- "Hello World!," Visual Studies Workshop, Rochester, NY, USA
- "Current...," Edelman Headquarters, New York, NY, USA
- 2009 "Emerging Artist's Exhibition," Franklin Artworks, Minneapolis, MN, USA
- 2007 "Duet No.3: Baker+Stewart," Quincy Street Gallery, Minneapolis, MN, US

Group Exhibitions

- 2012 "Crossing Wires," Evanston Art Center, Chicago, IL, USA
- "Illuminating Data: Visualizing the Information that Moves Our World," The College of New Jersey Art Gallery, Ewing, NJ, USA
- "ZERO1 Biennial," San Jose, CA, USA
- "SMart Multimedia Art Festival," Open Concept Gallery, Grand Rapids, Michigan, USA
- "CHI' 2012", Austin, Texas, USA
- 2011 "#isthemessage", Kunstenlab, Deventer, Netherlands
- "Scope Miami", Scope Foundation, Miami, FL, USA
- "Networked", Alta Technologia Andina, Lima, Peru
- "Social Media", Pace Gallery, New York, NY, USA
- "Virtual Identities," Centro di Cultura Contemporanea Strozziina, Florence, Italy
- "Second Lives: Jeux masqués et autres Je," Casino Luxembourg-Forum d'art contemporain, Luxembourg
- "Northern Spark", Northern Lights.MN, Minneapolis, MN, USA
- "Incidental Data", UTS: Gallery, Sydney, Australia
- "Ososphere Festival", Strasbourg, France
- "MAN, SUCH AS WE KNOW HIM, IS A COMPUTER", Mastodon Mesa, Hollywood, CA, USA
- "Everything in Time", Center for Book Art, New York, NY, USA
- "The Block", Queensland University of Technology, Brisbane, Australia

湯馬士·傅胥（奧地利） 早在1990年代後期，湯馬士就已經開始寫高難度的JavaScript程式語言，他所設計的知名script.aculo.us框架，便是網路高度互動應用程式發展時代下的產物，並被運用於Apple.com、CNN.com及NASA.gov等各大網站。湯馬士持續運用Zepto.js.等各種框架，努力開創HTML及JavaScript的應用範圍。他形容自己是「假惺惺的藝術鬼」。

Thomas Fuchs (Austria) Thomas has been writing hard-core JavaScript since the late 1990s. His famous script.aculo.us framework was created during the development of one of the most highly interactive applications the Web had ever seen and it is used in such web sites & applications as Apple.com, CNN.com and NASA.gov. He has continued to push the boundaries of what is possible with HTML and JavaScript with libraries like Zepto.js. He is a self-described “artsy wanker.”

艾美·禾伊（美國） 艾美是網路程式語言「鐵路上的紅寶石」中最知名的設計師，她以搞笑式教學出名，搭配清楚的解說圖片以及貼切的譬喻。艾美擁有十年以上講解技術概念的經驗，她的表達方式充滿娛樂效果，卻又清楚易懂，不但桃李滿天下，演講行程更遍及全球。

Amy Hoy (USA) Amy is the most famous designer in the Ruby on Rails world, known for her gut-bustingly funny laugh-out-loud tutorials, great explanatory graphics, and apt metaphors. She has got over 10 years' experience in explaining technical concepts in an entertaining and understandable way, and she has been teaching thousands of students and has spoken at countless conferences all over the world.

麻省理工學院感應型城市實驗室（美國）

個展

2010 「感應型城市：探索都市的未來」，灰色地帶基金會，舊金山，美國

聯展

2011 「跟我說話」，當代藝術館，紐約，美國

2010 「威尼斯建築雙年展」，威尼斯雙年展，威尼斯，義大利

「修復」，電子藝術節，林茲，奧地利

2008 「設計與靈活思維」，當代藝術館，紐約，美國

SENSEable City Lab (USA)

Solo Exhibition

2010 “SENSEable Cities: Exploring Urban Futures,” Grey Area Foundation , San Francisco, USA

Group Exhibitions

2011 “Talk To Me,” Museum of Modern Art NY, New York, NY, USA

2010 “Venice Architecture Biennale,” La Biennale di Venezia, Venice, Italy

“Repair,” Ars Electronica Festival, Linz, Austria

2008 “Design and the Elastic Mind,” Museum of Modern Art NY, New York, NY, USA

翻越旅行 Hyper Trip

蜜雪兒·泰倫（加拿大）

展覽

2012 「線上多元頻率移鍵」，當代藝術館，羅斯基爾，丹麥

「媒體表象藝術節」，媒體文化中心，赫爾辛基，芬蘭

「布萊頓數位藝術節」，燈塔藝術中心，布萊頓，英國

2011 「追蹤移動」，世界文化中心，柏林，德國

「城市藝術節」，格瑞克電影中心及其它地區，札格雷布，克羅埃西亞

2010 「當代藝術沈思雙年展」，國家美術館，波茲南，波蘭

「駭客城市」，福克旺美術館，埃森，德國

2009 「流動」，恩赫芬，荷蘭

Michelle Teran (Canada)

Exhibitions

2012 “MFSK_Online,” The Museum of Contemporary Art, Roskilde, Denmark

“Media Facades Festival,” M-Cult, Helsinki, Finland

“Brighton Digital Art Festival,” Lighthouse, Brighton, England

2011 “Tracing Mobility,” Haus der Kulturen der Welt, Berlin, Germany

“Urban Festival,” Cinema Gric and various locations, Zagreb, Croatia

2010 “Mediations Biennale of Contemporary Art,” National Museum, Poznan, Poland

“Hacking the City,” Museum Folkwang, Essen, Germany

2009 “flux-s,” Eindhoven, The Netherlands

智慧合作社 Wisdom Association

史考特·德雷弗斯（美國）

個展

2011 「衍生藝術的先鋒」，貢獻藝廊，紐約，美國

聯展

2012 「人造情緒科技藝術雙年展」，伊陶文化館，聖保羅，巴西

「光流」，聯邦園藝展，柯柏林，德國

2011 「擴展抽象」，州立美術館視覺音樂中心，洛杉磯，美國

2010 「詩意密碼」，雀兒喜美術館，紐約，美國

「混種藝術」，HybridArt.ru，莫斯科，俄羅斯

2009 「藝術在奇怪的地方」，紐約，美國

2008 「衍生」，SESC藝廊，聖保羅，巴西

「設計與靈活思維(網路版)」，紐約當代藝術館，紐約，美國

2007 「燃燒人體減壓」，皇后藝術美術館，紐約，美國

Scott Draves (USA)

Solo Exhibitions

2011 “Pioneer of Generative Art,” Devotion Gallery, New York, NY, USA

Group Exhibitions

2012 “Emoção Art.ficial Biennial of Art and Technology,” Itau Cultural, São Paulo, Brazil

“Lichtströme,” BUGA, Koblen, Germany

2011 “Expanded Abstraction,” LACMA & CVM, Los Angeles, USA

2010 “Poetics of Code,” Chelsea Art Museum, New York, NY, USA

“Hybrid,” HybridArt.ru, Moscow, Russia

2009 “Art in Odd Places,” New York, NY, USA

2008 “Generativa ,” SESC Avenida Paulista, São Paulo, Brazil

“Design and the Elastic Mind (website),” Museum of Modern Art, New York, NY, USA

2007 “Burning Man Decompression,” Queens Museum of Art, New York, NY, USA

彼得·愛德蒙（澳洲）

聯展

2011 「藝術機器」，澳洲國家大學，坎培拉，澳洲

2007 「從沒去過休士頓」，朗岱爾藝術中心，休士頓，美國

2006 「魅影隊長」，前衛藝術中心，紐約，美國

「正在畫！」白垃圾當代藝術中心，漢堡，德國

「部份參與」，特倫托及羅裴爾托當代藝術中心，羅裴爾托，義大利

Peter Edmunds (Australia)

Group Exhibitions

2011 “Art Machine,” Australian National University, Canberra, Australia

2007 “Never Been to Houston,” Lawndale Art Center, Houston, Texas, USA

2006 “Phantom Captain,” Apex Art, New York, NY, USA

“DrawingNow!,” White Trash Contemporary, Hamburg, Germany

“ParticipART,” Museum of Modern and Contemporary Art of Trento and Rovereto, Rovereto, Italy

白鷺鷥文教基金會（台灣）

白鷺鷥文教基金會成立於一九九三年九月，由創辦人盧修一博士與藝術界熱心人士共同推動組成，希望透過財團法人之基金會運作，對過去長久以來被忽略的本土藝術文化進行保存與發揚，並經由社會教育的途徑，使之達到普及的功效。

基金會自成立以來，已陸續舉辦過「巡迴音樂會系列」、「台灣音樂一百年」等大型系列音樂活動，並不定期舉行新秀音樂會、公益慈善音樂會，以及邀請國內外著名音樂家蒞臨演出，期望透過不同層面之優質音樂會，培養社會大眾對藝術之喜好，再者則希望透過藝術教化，達到涵詠人心、淨化社會之功效。

除展演活動外，亦針對台灣音樂，美術與本土文化做深入、系統之蒐集與介紹；並對早期與台灣本土文化相關的人物、史料作有系統之整理、保存與出版。近年來，基金會朝向文化創意產業從事深度之研究出版與推廣計畫，期能對台灣當代文化藝術發展有所助益。

Egret Culture and Education Foundation (Taiwan)

The Egret Culture and Education Foundation was founded in September 1993 by Dr. Lu Hsiu-yi and a group of art and cultural enthusiasts. The mission of the foundation is to preserve and promote local art and culture and to also offer more accessibility to the public through educational means.

Several large scale music events have been presented since the founding of the foundation, including “Concert Tour Series” and “100 Years of Taiwanese Music,” and furthermore, the foundation also periodically presents new talent concerts, charity concerts, and invites renowned local and international musicians to perform in Taiwan. The objective is through exceptional concerts of various genres to cultivate the public’s interests in art and also through the democratization of art to form a sense of purity and peacefulness in the society.

In addition to performing events, the foundation also conducts in-depth systematic collection and overview of Taiwanese music and art. Moreover, systematic organization, preservation, and publication of early influential figures and historical documentations of Taiwanese local culture are also executed. In the recent years, the foundation has been focusing its efforts on comprehensive research, publication, and promotional projects for the creative cultural industry, and hopes to bring positive benefits for the development of contemporary art and culture in Taiwan.

姜小蠻（紐西蘭）

個展

2012 〈地景縮寫〉，紐約波浪山，美國

2011 〈漫畫接力〉，愛賓科技藝術中心，紐約，美國

聯展

2012 「檔案藝術節」，SESI-SP藝廊，聖保羅，巴西

2011 〈自動創意〉，愛賓科技藝術中心，紐約，美國

2010 「聖荷西01SJ雙年展：成立個人世界」，聖荷西，美國

「堅強藝術」，兒童美術館，匹茲堡，美國

2009 「反對的自治權」，Transitio_MX藝術節，墨西哥市，墨西哥

「因果關係」，LM藝術計劃，洛杉磯，美國

「米蘭公共設計藝術節」，米蘭戶外區，義大利

「新前線」，日舞影展，派克，美國

2008 「光彩」，聖塔莫尼卡，美國

「Sonar」，未來過去電影節，當代藝術館，巴塞隆納，西班牙

「互動？2008玩視覺」，普拉多媒體藝術實驗中心，馬德里，西班牙

Nova Jiang (New Zealand)

Solo Exhibitions

2012 *Landscape Abbreviated*, Wave Hill, New York, NY, USA

2011 *Ideogenetic Machine*, Eyebeam, New York, NY, USA

Group Exhibitions

2012 “File Festival,” SESI-SP Art Gallery, São Paulo, Brazil

2011 *Creatomatic*, Eyebeam, New York, NY, USA

2010 “01SJ Biennial: Build Your Own World,” San Jose, USA

“Tough Art,” Children’s Museum of Pittsburgh, Pittsburgh, USA

2009 “Autonomies of Disagreement,” Transitio_MX, Mexico City, Mexico

“Cause and Effect,” LM Projects, Los Angeles, USA

“Milan Public Design Festival,” Esterni, Milan, Italy

“New Frontier,” Sundance Film Festival, Park City, USA

2008 “Glow,” City of Santa Monica, Santa Monica, USA

“Sonar,” Future Past Cinema, Barcelona Museum of Contemporary Art ,Barcelona, Spain

“INTERACTIVOS?’08 Vision Play,” Medialab-Prado, Madrid, Spain

亞倫·科柏林（美國）

2011 「跟我說話」，當代藝術館，紐約，美國

「當代錦集」，龐畢度中心，巴黎，法國

2009 「解碼」，維多利亞與亞伯特博物館，倫敦，英國

「藝術數據」，帕薩迪納美術館，帕薩迪納，美國

「創意與認知」，柏克萊美術館，柏克萊，美國

2008 「008 設計與靈活思維」，當代藝術館，紐約，美國

2007 「虛擬空間」，藝術創意工業中心，希洪，西班牙

Aaron Koblin (USA)		
Selected Exhibitions		
2011	“Talk To Me,” MoMA, New York, NY, USA “Collections Contemporaines,” Centre Pompidou, Paris, France	
2009	“Decode: Digital Sensations,” Victoria & Albert, London, England “Data+Art,” PMCA, Pasadena, CA , USA “Creativity and Cognition,” Berkeley Art Museum, Berkeley, USA	
2008	“Design and the Elastic Mind,” MoMA, New York, NY, USA	
2007	“Cyberspaces,” Laboral Centro de Arte y Creación Industrial, Gijon, Spain	

喬奧·恩力克·韋爾伯特（巴西）

2011	「動態的詩句」，大阪，日本
2010	「七拼八湊」，巴西 「未來建築群」，31藝廊，倫敦，英國 「解碼：數位震撼」，維多利亞與亞伯特博物館，倫敦，英國 「解碼：數位震撼」，中央美術學院，北京，中國 「解碼：數位震撼」，車庫當代文化中心，莫斯科，俄羅斯 「想像力」，烏茲，波蘭
2009	「布列達平面設計藝術節」，布列達，荷蘭 「米蘭家具展」，米蘭，義大利 「巴黎家具家飾展」，巴黎，法國 「金錢百態展覽」，盧森堡 「想像力」，新藝術館，紐約，美國
2008	「重寫」，金史密斯學院，倫敦，英國
2002	「八隻蚊子」，伊塔屋藝術中心，聖保羅，巴西

João Henrique Wilbert (Brazil)

2011	“Poetry of Motion,” Osaka, Japan
2010	“The Kludgists,” Brazil “Swarming Futures of Architecture,” Gallery 31. London, England “Decode: Digital Sensations,” Victoria & Albert, London, England “Decode: Digital Sensations,” CAFA, Beijing, China “Decode: Digital Sensations,” CCC Garage, Moscow, Russia “Imaginaires,” Lodz, Poland
2009	“Graphic Design Festival,” Breda, Netherlands “Salone del Mobile,” Milan, Italy “Maison et Objet,” Paris, France “Colors of Money,” Luxembourg “Imaginaires,” New Museum. New York, NY, USA
2008	“RE-Write,” Goldsmiths. London, England
2002	“Eight Mosquitos,” Itaú Cultural, São Paulo, Brazil

解構<—>建構之間 Inter-struction

亞歷山卓·路多維可 | 保羅·奇理歐（義大利）

個展	
2012	「真實流動駭客」，亞克斯歐馬藝術中心，盧布尼安那，斯洛維尼亞
聯展	
2012	「未來藝術」，當代藝術館，里約熱內盧，巴西 「第七屆首爾國際媒體藝術雙年展」，首爾，韓國 「失控」，電子藝術中心，林茲，奧地利 「來自法老女神卡卡」，昇華美術館，華沙，波蘭
2011	「跨媒體」，柏林，德國
2008	「安娜庫尼可娃被個人授權系統刪除了」，媒體藝術中心，多特蒙德，德國

Alessandro Ludovico | Paolo Cirio (Italy)

Solo Exhibition	
2012	“REALITYFLOWHACKED,” Aksioma Project Space, Ljubljana, Slovenia
Group Exhibitions	
2012	“ArtFutura”, Museum of Modern Art, Rio de Janeiro, Brasil “7th Seoul International Media Art Biennale”, Seoul, Korea “Out of Control”, Ars Electronica Center, Linz, Austria “From the Pharaoh Lady Gaga”, Wywyższeni, Warsaw, Poland
2011	“Response:Ability, Transmediale”, Berlin, Germany
2008	“Anna Kournikova Deleted By Memeright Trusted System”, HMKV, Dortmund, Germany

凱爾·麥唐納（美國）

個展	
2011	「駐館藝術家計畫展」，山口媒體藝術中心，山口，日本
2010	〈事事皆永恒〉，倫斯勒理工學院綜合電子藝術中心，特洛伊，美國
聯展	
2012	「公平交易」，愛賓科技藝術中心，紐約，美國 「線框」，愛賓科技藝術中心，紐約，美國 「駭客藝術日」，319藝術中心，布魯克林，美國
2011	「屍體群」，布蘭數位藝術中心搖滾藝術節，聖布里厄雷恩，法國
2009，2010，2011	「兒童電影媒體實驗室」，兒童電影節，阿姆斯特丹，荷蘭
2009	「夢的機器」，首爾，南韓
	「OFFFMatica」，OFFF數位藝術節及Sonar音樂祭，巴塞隆納，西班牙

Kyle McDonald (USA)

Solo Exhibitions	
2011	“Guest Research Project vol. 1 Exhibition,” YCAM, Yamaguchi, Japan
2010	<i>Only Everything Lasts Forever</i> , IEAR at RPI, Troy, NY, USA
Group Exhibitions	
2012	“Fair Exchange,” Eyebeam, New York, NY, USA
	“Wired Frames,” Eyebeam, New York, NY, USA
	“Art Hackday,” 319 Scholes, Brooklyn, USA
2011	“Corpus numerica,” Bouillants, Art Rock, Rennes, Saint-Brieuc, France
	“OFFFMatica,” OFFF and Sonar, Barcelona, Spain
2009, 2010, 2011	“Cinekid Medialab,” Cinekid Festival, Amsterdam, Netherlands
2009	“Machine Dreams,” KolAN, Seoul, South Korea

純粹是：紀子衡、卓立航、李季穎、林廷達（台灣）

Purels：Tzu-Heng Chi, Li-Hang Cho, Chi-Ying Lee, Ting-Ta Lin (Taiwan)

紀子衡

聯展	
2012	「超旅程未來媒體藝術節」，關渡美術館，台北，台灣
2011	「台北數位藝術節」，剝皮寮歷史街區，台北，台灣

Tzu-Heng Chi

Group Exhibitions	
2012	“Transjourney – 2012 Future Media Festival,” Kuandu Museum of Fine Arts, Taipei, Taiwan
2011	“Taipei Digital Art Festival,” Bopiliao Historic District, Taipei, Taiwan

卓立航

個展	
2005	台灣藝術教育館，台北，台灣
聯展	
2011	「台北數位藝術節」，剝皮寮歷史街區，台北，台灣
2009	「2009 設計師週展」，華山藝文特區，台北，台灣
2008	「新一代設計展」，台北世界貿易中心，台北，台灣

Li-Hang Cho

Solo Exhibition	
2005	National Taiwan Arts Education Center, Taipei Taiwan
Group Exhibitions	
2011	“Taipei Digital Art Festival,” Bopiliao Historic District, Taipei, Taiwan
2009	“Designers' Week,” Huashan Creative Art Park, Taipei, Taiwan
2008	“Young Designers' Exhibition,” Taipei World Trade Center, Taipei, Taiwan

李季穎

個展	
2011	「聲林浴」，國立東華大學，花蓮，台灣
聯展	
2011	「台北數位藝術節」，剝皮寮歷史街區，台北，台灣
2010	「漢字藝術設計大賽」，華山漢光教育基金會，台北，台灣

Chi-Ying Lee

Solo Exhibition	
2011	“Sound Shower,” National Dong Hwa University, Hualien, Taipei, Taiwan
Group Exhibitions	
2011	“Taipei Digital Art Festival,” Bopiliao Historic District, Taipei, Taiwan
2010	“Excellent Chinese Character Design Collections,” Hanguang Education Foundation, Huashan Creative Art Park, Taipei, Taiwan

林廷達

聯展	
2011	「台北數位藝術節」，剝皮寮歷史街區，台北，台灣

Ting-Ta Lin

Group Exhibition	
2011	“Taipei Digital Art Festival,” Bopiliao Historic District, Taipei, Taiwan

策展人簡歷 Curators' Biographies

林 書民	
出生於台北市，旅居美國紐約 15 年，上海工作 6 年。曾任職紐約科技學院藝術系研究所副教授、美國藝術與科學協會理事主席、宏碁數位藝術中心顧問、時報週刊美洲地區專欄作家等。林書民多年從事雷射立體全像藝術及錄影裝置藝術創作，作品常於國際各美術館展出。2001年獲選代表台灣參加威尼斯雙年展。2003年擔任第50屆威尼斯雙年展台灣館策展人。2006年擔任上海雙年展策展人。2007年受邀策劃目前國際最大型的奧地利電子藝術節Ars Electronica，為該活動 33 年來首度對外邀請之國際策展人。	
Shu-Min Lin	
Shu-Min Lin was born in Taipei, lived in New York for 15 years, and has been working in Shanghai for 6 years. Some of Lin's previous positions include: Associate Professor at the New York Institute of Technology Graduate School of Art, served on the Board of Directors for Art & Science Collaborations, Inc., Consultant for Acer Digital Arts Center, Columnist for China Times Weekly's American region, amongst others. Lin was devoted for several years in creating holographic works and video installations and exhibited frequently in museums around the world. In 2001, he represented Taiwan in participating in Venice Biennale, and followed by the position as the curator for the 50th Venice Biennale, 2003, Taiwan Pavilion. In 2006, he was the curator for the Shanghai Biennial. In 2007, he was invited to curate for the globally renowned Ars Electronica, and was the first international curator invited by the organization in its 33-year history.	
傑弗瑞·史塔克	
身兼媒體藝術家與通訊工程師，1991年創立跨界創作團體x-space，完成許多裝置及表演藝術創作計劃，其作品特色融入互動元素、機器人及電信通訊等；1995年起擔任奧地利電子藝術節藝術總監；1995至1996年期間，率領藝術家及技術人員開創電子藝術中心的展覽新策略，成立內部研發部門「電子藝術未來實驗室」；2004年起，肩負發想執行電子藝術節的國際展覽計劃；2005年起，主導電子藝術中心主題性的擴整與規劃。	
Gerfried Stocker	
Gerfried Stocker is a media artist and telecommunications engineer. In 1991, he founded x-space, a team formed to carry out interdisciplinary projects, which went on to produce numerous installations and performances featuring elements of interaction, robotics and telecommunications. Since 1995, Gerfried Stocker has been artistic director of Ars Electronica. In 1995-96, he headed the crew of artists and technicians that developed the Ars Electronica Center's pioneering new exhibition strategies and set up the facility's in-house R&D department, the Ars Electronica Futurelab. He has been chiefly responsible for conceiving and implementing the series of international exhibitions that Ars Electronica has staged since 2004, and, beginning in 2005, for the planning and thematic repositioning of the new, expanded Ars Electronica Center.	

曼努艾拉·納弗	
1997年至今同時身兼藝術家與策展人的角色，2003年為奧地利電子藝術中心之策展人，並與傑佛瑞·史塔克共同合作發展出電子藝術中心海外事務組並擔任總監，負責將電子藝術中心的展覽推廣至國際的其他館舍與機構。目前主要研究領域為「群眾與藝術」，探討網路藝術與互動參與的新形式與可能性，以及其對現有的藝術實踐方式的影響。	
Manuela Naveau	
Manuela Naveau has been working as an artist and curator since 1997. In 2003, she assumed curatorial and project management responsibilities at Ars Electronica. In collaboration with Gerfried Stocker, artistic director of Ars Electronica Linz GmbH, Manuela Naveau developed the Ars Electronica Export division, which she has headed since its inception. In addition to curating, producing and placing Ars Electronica exhibitions at museums and institutions worldwide, her interest is focused on the manifold manifestations of contemporary artistic practice. Manuela Naveau is currently working on “Crowd & Art”, investigating in new forms of internet-based participation in the artistic process and their influence on artistic practice that is currently in a phase of flux.	

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2012/10/13-12/23

國立台灣美術館 A1 展覽室

Gallery A1, National Taiwan Museum of Fine Arts

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