

Mark Stephen Meadows

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Technical Invention, Leadership, R&Dev and Execution

Author, artist and experienced executive with over two decades' expertise sparking combustible technologies (AI, XR, biotech) across five continents. Proven track record building and executing creative, technical and business strategies in both hyper-growth and international research environments. Hands-on experience from inventing and patenting high-risk / high-reward technologies, building teams and fostering sustainable cultures. Associated experience (concept to app store) raising capital to align strategies and long-lasting partnerships to deploying final, tested products.



Nationality: American-French (dual passport)

Languages: **English** (native), **French** (fluent), **Spanish** (conversational). Can decode Homeric Greek, Latin, Python, C++, and cocktail conversations.

Keywords: AI, NLP, XR, Biotech, Books, Patents, NASA, Startups

Experience:

2022-Present NASA (nasa.gov), Washington DC



Management, Researcher, SciFi Writer. As Research Scientist and Futures Strategist within NASA's ARMD > TACP > Discovery group, I led initiatives in developing AI, strategic foresight and innovation. My work ranged from researching comprehensive 50-year scenarios integrating advanced and novel technologies; leading development of mission-critical AI infrastructure; assisting with NASA's AI strategy and governance frameworks; building strategic partnerships and assisting with outreach. Through strategic foresight methodologies, our group informed strategic decisions and technological roadmaps, invented models for sustainable aviation, sub-orbital manufacturing, and extraterrestrial infrastructures while also addressing challenges of underprivileged communities here on Earth. Our work uncovered multiple new opportunities and helped guide NASA's strategic directions in ARMD. Awarded as "Distinguished Researcher" in 2025.

2020-2022 Idoru World, Inc (idoru.world), New York



CTO & Employee #1. Assisted in formation and funding of the startup company from concept to app store. I was responsible for inventing core technologies and developed company's technology strategy and IP filings. Worked tightly with CEO and CPO on all aspects of the company, assisting in hiring, strategies, compliance, Agile development methods, testing, integration and other core efforts specifically related to XR and AI. Evaluated technical feasibility and market acceptance of emerging technologies. Developed and improved AI-driven design techniques and applied those to best practices.

2011-2020 Botanic Technologies, Inc ([Botanic.io](https://botanic.io)), San Francisco

CEO & Founder



Botanic provided chatbot services (AI / ML / NLP) to customers including Microsoft, Logitech, BMW, Rolls Royce, government agencies and dozens of start-ups. Founded company and invented conversational avatar technology stack for licensing and consultancy. Initiated and managed high-risk, high-reward research projects aimed at solving complex AI challenges. Coordinated cross-organizational efforts to implement innovative solutions in conversational AI and avatar technologies.

2016-2019 SEED Blockchain (ETH) + ChatBot Economy, Singapore



Founder / Trustee. The SEED community (a spin-off of Botanic) offered a blockchain-based market chatbots and conversational AI. Built as an ERC-20 the utility token was an incentivisation for data curation, contribution and use. The economy was built on a free-to-use and paid basis. Funded by Outlier Ventures and others SEED raised approximately 4.5m USD in ETH which went to building out a team of 9,000 community members and 32 FTEs.

2005-2007 HeadCase Humanufacturing, Los Angeles

Founder / Chief Creative Officer



Built NLP technology stack, hired core management team and raised financial support for specialities in natural language processing and autonomous avatar management. Led UX and IP strategies.

2002-2004 Waag Center for New Media, Amsterdam

AI & NLP Researcher



Researched in AI, NLP, VR, emotional measurement methods, and interactive avatar-based technologies in coordination with the Dutch New Media Guild and other European new media entities. Post led to profitable initiatives and ongoing relations with Dutch government.

2000-2001 Stanford Research Institute, International, Palo Alto

Creative Director



This work involved taking IP assets from SRI and coupling those with investors and entrepreneurs towards launching multiple start-ups. Started approximately twelve companies with this model, most of which then merged or were acquired.

1998-2000 Xerox-PARC, Palo Alto

Researcher / Artist-in-Residence



Worked with Rich Gold, Mark Weiser and others as resident researcher and VR expert developing interactive narratives for a traveling exhibition-based flagship project that Xerox-PARC sent around the world named "Reading in Experimental Documents." Work included early investigations into open source and artificial intelligence. Emphasis on NLP as a narrative and reading method via 3D avatars.

1995-1998 Construct Internet Design, San Francisco

Founder & Board Member / Chief Creative Officer



Founded (with Lisa Goldman & James Waldrop) a company of thirty people dedicated to developing 3D worlds for large software companies. Participated in the browser wars of the '90s as a company working for both MS and Netscape. Additional research-based work was done as consultancy. Sold the company in 1998.

1992-1994 The Well (WELL.COM), San Francisco

Webmaster (Graphic Design, Community Management)



Implemented graphic design and interface of the third commercial dot-com web server. Developed look / feel and overall web-based community structure. Implemented community assisted page design, assisted in developing the web's first personal profile pages, UI conventions and the very first webpage with a cat.

Books (technology & culture books only - other publications available on request):

- **We, Robot; Skywalker's Hand, BladeRunners, and How Fiction Became Fact** (2010) Robots. Science fiction, engineering fact, and the various human futures robots present.
- **I, Avatar; The Culture and Consequences of Having a Second Life** (2006) Virtual Reality. Online identities as self-portrait, online social interaction and social robotics, physical-world impacts of virtual-world living.

- **Pause & Effect; The Art of Interactive Narrative** (2001) Games. A survey on the intersection of visual arts, literature, and interactivity.
- **Additional books** include international sailing adventures, hitch-hiking adventures through warzones, interviews with terrorists and narcos. Occasional interviews and op-ed contributions to multiple journals & publications.

Media & Public Appearances (full list available on request):

Appearances on USAToday, CNN, FoxNews, and articles in multiple magazines, etc. Full list available on request. Over 200 lectures (given in English or French), radio, and television appearances in Europe, US, Asia, and Australia. Highlights from the past decade:

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| • Cité des Sciences et Technologies, Paris | • National German Academy of Art, Braunschweig |
| • AI-2006 & 2012, Cambridge, UK | • Philips Research, Eindhoven |
| • American Express Innovations Summit, New York | • SagasNet, Stuttgart |
| • Art Center, Pasadena | • San Francisco State University, San Francisco |
| • Australian Film Television Radio School (LAMP), Sydney | • Sorbonne University / Paris8, Paris, |
| • Centre for Living & Electronic Arts, Perth | • South By Southwest, Austin |
| • Cité des Sciences et Technologies, Paris | • Technical University Eindhoven, Eindhoven |
| • Fujitsu-Xerox Research, Palo Alto | • University of California, Santa Barbara |
| • Game Developer's Conference, San Francisco | • University of Southern California Film School |
| • Hungarian National University of Fine Art, Budapest | • University of Southern California, Film Division |
| • IBM Research Laboratories, Hurlsey | • University of Technology, Sydney |
| • Industrial Design School, Oslo School of Architecture | • Utrecht School of Art & Technology |
| • Kunsthochschule für Medien, Cologne | • Waag Institute, Amsterdam |
| • Media Catalyst, Amsterdam | • Xerox-PARC / FXPAL, Palo Alto |
| • Mediamatic, Amsterdam | • XmediaLab, Singapore |
| • Monash University, Melbourne | • ZKM / SagasNet, Karlsruhe |
| • National Communications Center, Lisbon | |

Patents:

Over two dozen patents on behalf of research centers, customers and companies this list includes both pending, accepted and other status. Examples:

- SYSTEMS AND METHODS FOR AUTHORING AND MANAGING EXTENDED REALITY (XR) AVATARS, #63246157 [\[link\]](#)
XR / VR / AR avatar management. Methods for generating, editing and placing a customized avatar into various games, AR and VR spaces.
- SYSTEMS FOR EXECUTING CRYPTOGRAPHICALLY SECURE TRANSACTIONS USING VOICE AND NATURAL LANGUAGE PROCESSING, #14668882:
Voice-to-blockchain bridge. Methods for completing sales transactions via NL such as selling /purchasing tickets, vouchers, physical goods, etc.
- SYSTEMS AND METHODS FOR VETTING AND AUTHENTICATING THE IDENTITY OF AN AVATAR, #9,253,183 B2:
Authenticating an avatar's identity so that it may be trusted and earn reputation (like license plates).
- SYSTEMS AND METHODS FOR NATURAL LANGUAGE PROCESSING, #11682813:
Methods for processing natural language, identifying meaning and generating a response via text interface.

- SYSTEMS AND METHODS FOR MANAGING A PERSISTENT VIRTUAL AVATAR WITH MIGRATIONAL ABILITY; #11560743:
Bot and AI personality channel management. Methods for allowing an avatar to migrate between multiple platforms, follow a user and retain persistent states.
- SYSTEMS AND METHODS FOR AN AUTONOMOUS AVATAR DRIVER; #11960507:
Autonomous avatars driver. Means of using NLP and authentication to provide a visual representation of an autonomous conversational avatar.
- AUTONOMOUS BOT PERSONALITY GENERATION AND RELATIONSHIP MANAGEMENT, #125128-8006:
Methods of talking with an avatar via video-chat and generating personality via words, sounds, gestures and appearance.
- METHODS FOR DEVELOPING A BOT-SOURCED KNOWLEDGEBANK VIA SOCIAL EXPERT-LEARNER INTERACTION, (no#):
Blockchain ecosystem model to facilitate experts and learners information exchange. The network allows bots to improve dialogue models based on use.
- SYSTEMS FOR SECURING CONVERSATIONS VIA AUTHENTICATED BOT AND DUAL-KEY ENCRYPTION, (no#):
Dual-key SHA encryption using nested envelopes techniques for delivering secure messages to an authenticated bot and / or a third party.

Awards:

Ars Electronica Golden Nica, Stanford Electronic Art Award, Cooper-Hewitt National Design Museum Honors, Stoli Electronic Arts

Education:

Degrees include a Bachelor's in Math / Philosophy / Literature, and Master of Fine Arts in painting & photography. Non-degree experience in biology, art & philosophy.

- **Saint John's College**, Santa Fe, NM (USA) - BA In Math, Philosophy, and Literature
- **San Francisco Art Institute**, San Francisco, CA (USA) - MFA in Painting and Photography (Not Art institute of SF. SFAI ended operations in 2020)
- **Harvard University**, Boston, MA (USA) - Field research (Hawaii) in biology.

Personal Info:

- Married for 19 years with French National. Father of 2 sons.
- 5 years as USFS HotShot Fire Fighter (Pike and Sierra Inter-regional Category-1).
- Certified US Coast Guard 100-ton Captain. Sailed five of the 7 Seas.