Smart Home Operating Systems: A Formal Specification.

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Abstract:
The smart home operating system is built around RAVATTT, a proposed portal for DPA and state machine automation around the home and work. It works with a new natural programming language called RAVA, with an added text to the animation window to interactive fiction.
We illustrate this using an AWS Sumerian based implementation for animating interactive fiction, with assets, automatically generated from a database based asset storage.
The design of a tasklet basis with machine genome for assets, scenes, scene adaptation and for the animation is described for a SaaS-based service in AWS. RAVATTT, describes a programmable framework for non animated agent integration, integrating Alexa, Cortana, Siri, and much more conversational and multimodal UI.

Keywords: IFTTT, Alexa, Siri, Google Assistant, Cortana, RAVATTT, DPA, RPA, State Machines, text animation, home automation,

What: Add a text to an animation engine based on Unity game engine to optionally add animation to interactive text fiction, playable online on a browser.
How:

1. Provide an additional window with animation in a browser-based interactive text fiction.
    A front end taskoid TAUI.Unity(Bheemaiah, n.d.) for the UI with a genomic representation of scenes and assets, similar to soul machines(Machines 2018).

2. Provide the user with an avatar in the animation window to interact with the rest of the assets in each scene.
    The avatar is a primary asset, the host or hostess of the operating system, much like present conversational UI systems, based on real human models, like Amazon Alexa and Microsoft's Cortana, Smart OS host assets are purely fictional completely transcending reality, they could be fictional alien life forms or animated flora and fauna, even anthropomorphic constraints are inapplicable.
    The Unity Taskoid has scenes and assets, with each asset having a genomic representation in a transcription mechanism similar to the Taskoid formulation., U.[A] and U.[S]
3. Create algorithms for automated scene composition using a text description.
    U.[S] the set [S] is created from GAN based algorithms, using an expert system, metrics to quantize the functional ontologies of the tensor spaces of these media are described in a future publication.

4. Create algorithms for automated asset creation from the text in interactive fiction, if there is insufficient data, prompt the user for input, for selection of character templates.
   U.[A] are assets from a NoSQL based system using GAN networks and an expert system for a genomic transcription to assets, assets are adoptive. Assets are manifold as code , a part of IaC and are represented by U.[Ga], where [Ga] is a machine genomic representation, inspired by Soul Machines for asset encapsulation.
5. Illustrate with AWS Sumerian and AWS CLI for using Lex for this purpose. We design a Taskoid for a CloudFormation stack and template creation for CLI scripts, illustrating conversion of interactive Alexa based APL to a GAN, Expert System and machine genome based transcription. We illustrate this with a simple example of APL based scene addition with a GAN network.

Why:
"Chess is a boring Game" illustrates the need to move away from first-person action games and games with violent content, to a more creative circle, that of interactive fiction. While text-based adventure games and a larger genre of interactive fiction has been around since the last few decades, there is a need for text to animation software like nawmal and other similar packages, with a niche market for stadia by Google and Nvidia TV, and Fire TV.

Summary:

Main Points:
A machine genome representation for GAN network generated assets and scenes from textual description.
Addition of a host asset for work and home automation based on the Dog-Ear framework.
Digital Life, a reality with the smart OS.
Multi modality as a 360 immersive experience, with a possible augmentation in VR/AR.
Smart mirror and wearable integration in multi-modal UI.

Applications:
Digital Life as defined by MIT labs is a reality in the smart OS, enabling a richer digital experience.

Code Base:

Introduction.

Interactive Media as a distinctive form of art.

Interactive media(Bheemaiah, n.d.; "Website" n.d.; Reimer, n.d.; Rada 1995; Bendor 2018; O'Neill 2008; Labrecque and Schwartz 2016; Jin, Xu, and Xu 2012; Mauve 2000), transcends media, in an interactive form of artistic

expression, an expansion of the canvas of representation to a fluidic four dimensions, with time portrayed in much the realm of abstract space, creative space, human and natural dimensions and the realms of the human dimensions, as existentialism in a parallel reality to unbridled nature.

Much like art, surrealism and abstract representations have outgrown the celluloid form, to a new realm of choice based and completely interactive cinema, more like a Holodeck(Bheemaiah, n.d.; "Website" n.d.; Reimer, n.d.; Rada 1995; Bendor 2018; O'Neill 2008; Labrecque and Schwartz 2016; Jin, Xu, and Xu 2012; Mauve 2000; Gratch, n.d.), but as an art form.

Many a masterpiece of classical cinema can be encapsulated in an expert system, in the form of A.I based content much like other domains have knowledge expression and management. Interactive fiction("Interactive Fiction in Our Culture" 2003; Ford 2016; Buckles 1985), is a part of serious literature and an art form in itself, the extra dimensions of GAN based networks(Xu et al. 2018), add with expert systems, a complex reporterie of artistic expression in emotion, spiritual and creative spaces, creating a medium, more expressive and powerful compared to traditional media.

Digital Life is surreal, expressive, abstract and just as realistic as life.

"*Digital Life is a multi-sponsor, Lab-wide research consortium that conducts basic research on technologies and techniques that spur expression as well as social and economic activity. They first explore the design and scalability of agile, grassroots communications systems that incorporate a growing understanding of emergent social behaviors in a [digital world](); the second considers a cognitive architecture that can support many features of "human intelligent thinking" and its expressive and economic use; and the third extends the idea of inclusive design to immersive, affective, and biological interfaces and actions.* "

(Contributors to Wikimedia projects 2006) Everyone has a digital life, an interaction between a digital reality, the image in a smart mirror, the internet domains one owns, and the digital life he/she leads. Smart OS is about human-computer interface, of reactive design, of an immersive experience in everyday technology. The text to animation, in conjunction with work and home automation, is about smart user interfaces, a synergy with your digital identity, and the digital life.

Wearables and the Digital Life.

Soul Machines, heralded a new era of user interface, the digi-doug("TED2019: Live Virtual Version of Digital Domain's Doug Roble in Real Time - News - Xsens 3D Motion Tracking" n.d.) like revolution of a digital avatar, a part of your digital life.

Wearables have always been a part of the cyborg culture, wearables like watches and headsets have always been a part of the mainstream digital life, now smart watches and in ear computers called hearables(Bheemaiah, n.d.; "Website" n.d.), have made natural translation a part of one's digital life, smart mirrors, mirror life in the digital world. Smart OS within the dog-ear framework(Bheemaiah, n.d.), models, exactly this digital life, an automation framework of A.I in automation, retro fitted to any hardware, UI and interaction, with hyper vector spaces of text.

Problem Definition.

Interactive fiction is defined as a formal text based interactive system of assets and scenes and interactive text.

For a user u, and assets [a] , scenes, [s], there exists u.[t] and [a.[t]] with ->([s], [u.[t],[a.[t]]]
We prove the use of a GAN based creation of taskoids and transcription for [a] and [s], from a genomic representation.

> U.[A] are assets from a NoSQL based system using GAN networks and an expert system for a genomic transcription to assets, assets are adoptive. Assets are manifold as code , a

part of IaC and are represented by U.[Ga], where [Ga] is a machine genomic representation, inspired by Soul Machines for asset encapsulation.

Taskoid TAGANv1.0:

We design a Taskoid for a CloudFormation stack and template creation for CLI scripts, illustrating conversion of interactive Alexa based APL to a GAN, Expert System and machine genome based transcription. We illustrate this with a simple example of APL based scene addition with a GAN network.

Background.

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Formal Definitions:
> A front end taskoid TAUI.Unity(Bheemaiah, n.d.) for the UI with a genomic representation of scenes and assets, similar to soul machines.

> The avatar is a primary asset, the host or hostess of the operating system, much like present conversational UI systems, based on real human models, like Amazon Alexa and Microsoft's Cortana, Smart OS host assets are purely fictional completely transcending reality, they could be fictional alien life forms or animated flora and fauna, even anthropomorphic constraints are inapplicable.

The Unity Taskoid has scenes and assets, with each asset having a genomic representation in a transcription mechanism similar to the Taskoid formulation., U.[A] and U.[S]

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Discussion.

AWS APL includes media integration into interactive fiction. We replace the integration of media with Lambdas to convert textual scene descriptions to s3 based uniform resources of synthetic images, a taskoid TAGANv1.0.
We also integrate adding scenes to the Alexa Flow Tool for interactive fiction.

Future Work.

Future work would include funded and supported taskoids for Nvidia P3/P4 based Unity engine or BabylonJS based animation UI.

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