Public Hearing Manchester, VT Meeting Minutes

Park House Activity Room

340 Rec Park Rd, Manchester Center, VT 05255

October 10, 5:15-6:58 PM

Members present— Brian Cina; Joe Segale; Trey Dobson; Jill Charbonneau; and Honorable John Dooley.

Staff present—Ryan Flanagan

Public present— Jon Mathewson; Dave Potter; Emmett Stahl; Andrew McKeever; Ryan Van Meter; and Mike Cole.

(5:00-5:15 p.m.)—Public gathered and found seating for the event.

(5:15-5:32 p.m.) **Welcome, review of agenda**

- ❖ John Dooley opened the meeting by providing a background of the task force and its activities.
  - ❖ The task force was created by the General Assembly in 2018 to investigate the field of artificial intelligence and make appropriate recommendations.
  - ❖ He noted there are fourteen members of the task force. Each is varied in background with some involved in academia, government, and one working for IBM.
  - ❖ John Dooley took some time to introduce Brian Cina, representing the National Association of Social Workers-Vermont.
  - ❖ He also went into detail about what the task force has researched. He explained that they had looked at everything from autonomous vehicles to law enforcement and healthcare. The task force has also brought in speakers to discuss labor ramifications.
- ❖ John Dooley told the audience that what brings the task force to Manchester is public engagement. He wants to hear what the public will say about questions such as: *What's going on with AI in Vermont? Should there be ethical standards for this emerging technology? Should there be a permanent commission to study AI and report to Legislature on its findings?*
- ❖ John Dooley told the audience that AI has become so widely used in everyday applications that the task force has only been able to scratch the surface on the subject.
- ❖ He explained that the task to create this report is large and he is hoping to hear new perspectives tonight.
- ❖ Brian Cina then introduced himself.
  - ❖ Brian told the audience that he is on the task force due to his experience in human rights and ethics.
  - ❖ Brian explained that if AI is done correctly it can change the world in a very positive way. However, it can also further inequity.

❖ Members of the audience then gave introductions of themselves.
  ❖ The audience was diverse with people that worked as technologists, state
    representatives, and students.

(5:07-6:58 p.m.) **Public Comment & Discussion**

❖ The meeting then opened to public comment and discussion. Mike Cole, founder of Vermont
  STEMCorps, chose to participate first. He prepared a PowerPoint for the group on a new
  autonomous video streaming system at Manchester's Applejack Stadium, which automatically
  records games using preset algorithms.
❖ His presentation included:
  ❖ Key features of the technology including unmanned panoramic capture in 6K resolution
    and automated production. The technology also shifts the power to the viewer, allowing
    them to stream from any location at no cost.
  ❖ Effects on community engagement, including its potential to attract out-of-state
    colleges and universities, act as an advertising platform for local businesses, and support
    local schools.
  ❖ An explanation on how society, economy, and technology should co-evolve. Mike Cole
    wanted to create a framework for policy makers that makes informed decisions and
    manages risk. He urged people that to get on the fast track of this technology Vermont
    must "test fast, fail fast, and adjust fast."
  ❖ Last, Mike Cole included a summary of his organization, which works to get high school
    students industry-recognized credentials in their STEM field (ex. Software, IT,
    cybersecurity).
  ❖ A key point that Cole continually brought up during his presentation was how this
    technology can be used as an economic development tool. This technology is being
    deployed where needs are not met and brings revenue to the town through advertising
    and attracting more events.
❖ At 5:45 p.m., Jill Charbonneau arrived.
❖ Trey Dobson asked Mike Cole to describe the improvements from first use to the present.
  ❖ Mike Cole explained that it was first used on August 17th and has helped attract many of
    out-of-area schools.
  ❖ Ryan Van Meter explained that it uses pre-trained algorithms, so everything is
    automated for different flows of motion.
  ❖ Joe Segale then asked: *What is the definition for AI then? Would it be efficient
    algorithms or machine-learning?*
❖ This discussion then went into other definitions.
  ❖ Ryan Van Meter explained that artificial intelligence often falls into definitions such as
    machine learning or *deep learning*.
  ❖ This technology typically learns over time through data. Currently, there is no consensus
    on how this data is stored and used. In Vermont, the Attorney General has been doing

some work on this topic. Currently, California is doing research and Vermont is looking to follow them once research emerges.

❖ Trey Dobson then asked Ryan Van Meter to tell more about his background with this technology.

    ❖ Ryan explained that his company has worked on a variety of different projects for many companies. For example, his company might look at toxic chemicals and do analysis on their effects on human health through use of AI.

    ❖ AI essentially performs advanced statistical analysis. However, there are privacy concerns. It might help cure diseases but how do you protect people's medical records? Ryan explained that this information should encrypted to solve this issue.

❖ Joe Segale then asked Ryan Van Meter to discuss AI strategy.

    ❖ Ryan Van Meter told Joe that the big picture is to optimize something.

    ❖ AI is using regression, classification, clustering, and reinforcement learning to make this possible.

❖ John Dooley and Jill Charbonneau asked Ryan Van Meter what makes Vermont attractive to do AI work.

    ❖ Ryan explained that Vermont is not the place to do this work typically due to weather conditions. However, he has his own fiber lines.

    ❖ He told Jill that Vermont is developing in the technology field with its programs around coding, mathematics, and makerspaces. Burlington has even become a tech hub.

❖ Brian Cina asked Ryan Van Meter how Vermont might hinder AI.

    ❖ Ryan Van Meter told Brian that infrastructure is crucial for this technology

    ❖ Regulations might also affect product development and deployment.

❖ At this point in the conversation, Mike Cole added his thoughts to the discussion.

    ❖ Mike told the group that success creates opportunities. If Vermont wishes to use this technology, it must start early.

❖ The audience then discussed the topic of regulation regarding AI.

    ❖ Brian told the audience that the Legislature meets annually, and it needs someone checking in on this technology.

    ❖ Mike Cole said that there should not be a regulatory authority within AI. There should be an operational manager when it comes to developing and deploying AI. Mike also mentioned that predictive analytics have great value and towns should consider using AI to streamline processes.

❖ Joe then asked Ryan Van Meter to give more information about the size of his company.

    ❖ Ryan Van Meter explained that AI companies run the gamut when it comes to employee size. However, there are some large companies working in data science and making digital infrastructure.

❖ Dave Potter asked Ryan Van Meter to give his opinion on regulation.

    ❖ Ryan said that regulation is difficult to have in place for patents since technology is changing from week to week. There's also competition in data because smarter solutions will arise.

❖ Dave Potter stated that Vermont already has its toe stuck in regard to the regulation of AI cars.
  ❖ Ryan agreed that this is true. It could be saving human lives. However, AI is still unpredictable with autonomous cars and he urges people to keep testing.
  ❖ Joe Segale agreed that safety should be a concern and autonomous vehicles must be tested transparently.
  ❖ John Dooley added to the discussion, voicing that AI can help address several unmet needs. Autonomous vehicles could revolutionize public transportation.
❖ The discussion then shifted to ownership of these systems.
  ❖ Mike Cole asked the group: *Who owns these systems? Is it the person with the algorithm? Is it the person with the machine?*
  ❖ Patent and title are typically handled at the federal level. Ultimately, license and title must be established.
❖ Dave Potter asked Trey Dobson about AI and its potential to benefit healthcare systems.
  ❖ Trey voiced that there are some fields that doctors cannot even predict. There's also so much data we cannot analyze by ourselves. In the ICU, AI picks up on things doctors might not see.
❖ The conversation then turned back to the topic of ownership.
  ❖ Jill Charbonneau voiced that AI could have the potential to create an unequal distribution of wealth. People will also be working less hours and fewer jobs. However, AI might benefit rural and displaced areas.
  ❖ Jon Mathewson told Jill that a structure of wealth accumulation must be created before the technology is deployed.
  ❖ Mike Cole voiced that shared ownership might be good solution. Ryan Van Meter followed along those lines, saying that open sourcing offers great potential for the field to develop. Anyone can then take an algorithm and modify it.
❖ Mike asked Ryan Van Meter to talk about AI's effects on democracy.
  ❖ Ryan voiced that AI can create miracles if developed well, but it has potential to cause a lot of suffering too if not developed well. An example he gave is deep fake, which through advances in artificial intelligence could soon make creating convincing fake audio and video.
  ❖ He also provided the example of Facebook and others collecting mass data to exploit people's political fears around elections.
❖ Dave Potter asked Trey to discuss more of his thoughts on AI's effects on healthcare.
  ❖ Trey voiced that it has tremendous potential to help doctors. However, doctors will not be displaced. History also does not support what humans think will happen.
  ❖ John Dooley also asked how AI would be incorporated more into the healthcare system. Trey told John that the first steps now can be done by machine. Ryan Van Meter added that machine learning helps look at millions of variables, which humans cannot do. It will make doctors perform more efficiently in the end.
❖ Brian Cina and John Dooley then turned the conversation to jobs outside of healthcare.

- ❖ Brian told the audience that AI can help increase personal productivity. John Dooley said AI can also help in the legal systems with drafting documents and agreements. However, it would not be used for final decisions.
- ❖ Emmett Stahl asked about AI and how it might be used in law enforcement.
  - ❖ He heard that AI was using facial recognition from security camera footage, which appears to be an invasion of privacy. This technology is also being widely used in China.
  - ❖ Mike Cole asked if there was existing or proposed legislation regarding this issue.
    - ❖ Jill Charbonneau stated that there is proposed regulation by Senator Bernie Sanders.
- ❖ The audience also asked about the group's research. Where was the task force getting information from regarding AI?
  - ❖ Brian stated that UVM's legislative research had done a report for the group. The organization had done a basic report about AI policy and law back in 2016, but much has changed. Brian is hoping to receive an updated report by November of 2019.
  - ❖ Brian also mentioned that other states are now exploring AI and its effects on humanity. New York and Oregon are two states specifically looking at the AI's effects.
  - ❖ Nationally, President Trump has promoted AI, directing the Federal Government to prioritize research and development of America's artificial intelligence (AI) capabilities.
- ❖ At 6:58 p.m., the meeting adjourned. Some audience members stayed later and had additional conversations.