



# IHMC Board of Directors Teleconference Meeting

Friday, January 20, 2012

8:00 a.m. CST/9:00 a.m. EST – Teleconference Meeting  
1-850-202-4499, room # 5400, passcode: 4462

Roll Call

Chair Jim Reeves

Chair's Greetings

Chair Jim Reeves

## Action Items

1. Approval of December 12, 2011 Minutes

Chair Jim Reeves

## Chief Executive Officer's Report

1. Research Update

Dr. Ken Ford

2. Federal Legislative Update

Dr. Ken Ford

3. State Legislative Update

Jeff Hartley

4. Fundraising Committee Update

Vice Chair Glenn Sturm

5. Ocala Building Update

Dr. Ken Ford

## Other Items

## Adjournment

IHMC Board of Directors Conference Call Meeting Minutes  
December 12, 2011

Roll Call Chair Jim Reeves

Chair's Greetings Chair Jim Reeves  
1. Approval of June 20, 2011 Minutes Chair Jim Reeves

Discussion Items

1. External Audit Update Finance Chair Dick Baker  
2. Fundraising Committee Update Vice Chair Glenn Sturm

Chief Executive Officer's Report

1. Legislative Update Dr. Ken Ford  
2. Research Initiatives Dr. Ken Ford  
3. Ocala Update Dr. Row Rogacki

Other Items

Adjournment

IHMC Director Dick Baker chaired the meeting in the absence of Chair Jim Reeves. Director Baker called the meeting to order at 8:30 a.m. central time. Directors in attendance included: Dick Baker, Carol Carlan, Ron Ewers, Eugene Franklin, Chuck Horner, Hal Hudson, Ray Russenberger, Gordon Sprague, Glenn Sturm, and Hal White. Also in attendance were Ken Ford, Sharon Heise, Row Rogacki, Julie Sheppard, Alan Ordway, and Ronnie Armstrong.

Acting Chair Baker welcomed the Board informing them that we had a quorum present to conduct business. Acting Chair Baker introduced Agenda Item 1 asking for a motion to approve the minutes of the June 20, 2011 meeting. Director Franklin moved and Director Carlan seconded the motion to approve the June 20, 2011 minutes. The Motion was unanimously approved.

Acting Chair Baker then introduced Discussion Item 1 and explained that the June 30, 2011 Financial Statements had been finalized by the external auditors and approved by IHMC Finance and Audit Committee. He explained that the audits were again excellent with no material issues and commended IHMC staff on their work. Acting Chair Baker also updated the Board on the projected financial for the coming fiscal year. A general Board discussion ensued on revenues and expenses and the impact of the Ocala operations.

Acting Chair Baker then introduced Vice Chair Sturm to discuss the Fundraising Committee Update. Vice Chair Sturm thanked Director Baker and updated the Board on several new prospects and the direction that IHMC was taking in seeking large donations to fund major initiatives. Vice Chair Sturm informed the Board that a five-year

commitment for a \$250,000 gift had been recently made and details were in the process of being developed. He ended by expressing his hope to have additional news at the January board meeting.

Acting Chair Baker thanked Vice Chair Sturm for his report and then turned to the IHMC CEO, Dr. Ford to provide his report.

Dr. Ford thanked Director Baker for chairing the meeting in the absence of the Board Chair Reeves and for the opportunity to provide this report.

Dr. Ford informed the Board that he was happy to report that he had his scheduled surgery and the results all appear great. He thanked the Board members for all of their encouragement during this time and added how much he and Nancy truly appreciated their friendship.

Dr. Ford began his report by commenting that much has happened at IHMC since the last Board meeting in June. Of particular interest, he added, was that on October 4th, USF and IHMC held a joint research day and signed a formal affiliation agreement. He added that both organizations have already begun discussions regarding the use and development of technology in several new and ongoing university science, engineering and medical research projects, including cybersecurity, robotics, underwater autonomous vehicles, natural language processing, and human/machine coordination.

Dr. Ford continued by mentioning that in addition to our new USF affiliation, IHMC continues to have formal agreements with UWF, FAU, UCF and FIT and that we are in discussions with several other potential partners and hope to announce those in the near future.

Dr. Ford also informed the Board that on October 11, IHMC hosted a celebration of the LEED Gold certification at the Ocala facility. He explained that the speakers ranged from Mayor Ewers to Representative Baxley to the DEP Director of Environmental Sustainable Buildings adding that it was well attended and we hosted tours of the facility. Dr. Ford stated that he was very proud of these accomplishments given the large scale of the project.

Dr. Ford also acknowledged and thanked Ron and Phyllis Ewers explaining that they generously contributed \$75,000 to IHMC to begin the Science Saturdays youth outreach program in Ocala. He mentioned that this program started November 5<sup>th</sup> with a flight experiment for 3<sup>rd</sup> to 5<sup>th</sup> graders and another session was held on Saturday, December 8<sup>th</sup> on dialogue and speaking with computers. He commented that IHMC Ocala is excited to start this new program and we anticipate that it will grow to the same level of success that it has enjoyed in Pensacola adding that if the first two sessions are any indication, it will be very well received. Dr. Ford also thanked Eric Nickelsen and Carol Carlan for their recent gifts explaining that both made a significant pledge and have been great supporters of IHMC Outreach activities. He concluded this part of his report by mentioning that

Whitney Bank has also submitted the final check of their pledge and Dr. Ford thanked Jim Reeves for his assistance in securing this pledge.

Dr. Ford then thanked KC Clark for his service to the IHMC Board of Directors adding that as many Board members know, KC served on the IHMC Board as a positional member, the Chair of the UWF Board of Trustees. He commented that KC's guidance and leadership throughout IHMC's beginning and growth cannot be overstated and all of us at IHMC send KC our best wishes and hope he will be a regular visitor to both IHMC Pensacola and Ocala.

Dr. Ford then welcomed General Charles (Chuck) Horner to the IHMC Board mentioning that he and Chuck go back a ways and it is a pleasure to work with Chuck again. Dr. Ford informed the Board that currently General Horner is the Chair of the UWF Board of Trustees.

Finally, Dr. Ford mentioned that his own service as Chair of the NASA Advisory Council has also drawn to a close and hopefully, like KC, he will have more time to devote to other pursuits, including spending more time in Pensacola and Ocala.

Dr. Ford then turned to new hires adding that in addition to the many interns and graduate students we employ throughout the year, he was happy to report on several new hires in the Ocala location. He mentioned that in the February time frame, we have a new research scientist joining the team — Dr. Micah Clark a Senior Staff Member at the Jet Propulsion Lab at CalTech. Dr. Ford explained that his research interests include adversary modeling, AI, autonomy, behavioral economics, cognitive/social robotics, human-machine cooperation, and individual & team decision-making. He added that Micah's Ph.D. is in Cognitive Science from Rensselaer Polytechnic Institute, as is his B.S. in Computer Science and Philosophy and that Micah has spent the last 12 years at the Jet Propulsion Laboratory working in intelligent systems R&D fulfilling the complementary roles of AI technologist and software systems engineer.

Dr. Ford also mentioned that we are also pleased to announce that Ann Spang, formerly the Vice President for Corporate Relations at the Ocala/Marion County Economic Development Corporation, will be joining the team in Ocala in January as the Assistant Director for Community Relations. He explained that Ann's responsibilities would include public relations, soliciting and coordinating sponsors for education and outreach efforts in Ocala, supervising reception staff, and coordinating events at Ocala-IHMC, such as conferences and workshops, lectures, Science Saturdays etc.

Dr. Ford then informed the Board about several administrative updates including another clean audit as was discussed by Director Baker adding that keeping up with government accounting and contracting issues is no easy task and that he was pleased with our work in that regard. He also informed the Board that IHMC has recently installed a new phone system and changed Internet providers as well as establishing a metroNet connection between our facilities in Pensacola and Ocala. He explained that this direct 100Mb/sec connection enables a substantially improved video conferencing capability between our

two primary locations and facilitates collaboration between geographically distributed teams of researchers. Dr. Ford ended his administrative comments by informing the Board that we have received several thousand dollars in donations from the Cmap download site, explaining that this is a good start and helps absorb the cost of additional bandwidth absorbed by the Cmap server.

Dr. Ford continued his comments discussing that despite the challenging and uncertain legislative environment in Washington, IHMC continues to appreciate the support of our elected officials. He informed the Board that recently, Representative Steve Southland's staff, including his Military and Veteran's Affairs Liaison, Command Chief Master Sergeant Craig Deatherage, visited IHMC to discuss defense-related research adding that this was a key opportunity for IHMC to garner support for future collaborations with the Naval Surface Warfare Center in Panama City. He concluded by pointing out that the Federal situation will make success in Tallahassee all the more important.

Moving to State issues, Dr. Ford commented that as everyone is aware, the State continues to have serious financial issues but that IHMC generally has quite solid relationships with current and emerging leaders in the House and Senate. He mentioned that the Lt Governor visited IHMC Pensacola in late September and took the time for an overview and tour of the robot lab adding that she was instrumental in supporting us this past year and we were delighted to have her visit. He continued his state legislative discussion mentioning that session begins in January and committee weeks are currently being held and suggesting to the Board that any chance anyone has to put in a good word for IHMC is always appreciated as this year looks as tough as the past three have been from a Tallahassee fiscal outlook.

Dr. Ford informed the Board that the Governor's draft budget was made public on Wednesday, December 7<sup>th</sup> and IHMC is in this budget at \$1,457,864 in line item 137. He stated that although we are pleased to have this placeholder from last year, we would like to begin to return the state funding to the FY 2008 level of \$2,873,636 and that this increased funding would help with overall recruitment and job growth in both Pensacola and Ocala. He ended his state comments adding that IHMC appreciates all efforts this session to help us with this goal by talking to the Governor, his staff or Florida Representatives and Senators and mentioning that this coming Wednesday, December 14<sup>th</sup>, Representative Larry Ahern, Republican - St. Petersburg and Representative Betty Reed, Democrat – Tampa both members of the House Higher Ed Appropriations Committee will be visiting the Ocala facility to report back to their committee on IHMC activities asking members that may know either of these representatives to put in a good word.

Dr. Ford then turned to Ocala mentioning that there was quite a bit happening at the Ocala location and he asked IHMC Associate Director, Row Rogacki to provide an update.

Row thanked Dr. Ford for the chance to update the Board and mentioned that thanks to the generous donation made by Ron and Phyllis Ewers, IHMC has begun a Science

Saturday program in Ocala and that under the leadership of Dr. Dave Atkinson, it has gotten off to a great start. He added that while we anticipated starting with one session for 25 kids, it quickly became apparent that we needed to add a second session. Row commented that feedback has been very positive, and Ocala has had plenty of volunteer assistance from high school kids in the community.

Row informed the Board that on June 24<sup>th</sup>, he represented IHMC at a STEM Florida meeting, where IHMC was awarded a “Best Practices” Award for our Evening Lecture series noting that from now on, it’s the “Award-winning IHMC Evening Lecture Series.”

Row commented that IHMC has had two successful research days in Ocala since our last board meeting, one in September with the University of Florida and another in October with the University of South Florida adding that both days resulted in the identification of a number of areas of common research interest and potential funding opportunities. He mentioned that IHMC now has a formalized affiliation agreement with USF, and that we will be working on one with UF.

Row, turning his remarks to the building, mentioned that we have continued to make improvements to the IHMC Ocala facility and that he would provide a short update on several projects that are underway. He reminded the Board that at the last board meeting, he had mentioned that the A/C system is adequate most of the time, but it is inadequate to meet the demand during the evening lectures – when we have 200 people in attendance – especially during the hottest months of the year. He remarked that we have now successfully completed an improvement to our air conditioning system, adding additional units that met the criteria for cooling power and aesthetics. He mentioned that the Ocala facility has continued to experience some water incursion problems in the building and that we have begun to take steps to mitigate them, including hiring an engineering consultant to advise us on the best path forward. He stated that included in the consultant’s recommendations are modifications to the gutter system and resealing the joints between the windows and that these recommendations have been implemented and since taking these steps, we have not noticed any further leaks. He did state that he was continuing to monitor the situation and will take additional actions if warranted.

In other news, Row mentioned that IHMC Ocala had a team entered in this year’s American Heart Association Heart Walk, and the team raised over \$500 for research to find a cure for heart disease. He also mentioned that during this year’s “Light Up Ocala” event in late November, IHMC Ocala was privileged to host none other than Old St Nick, as Santa used our facility as a staging area for the event. Row then thanked Dr. Ford for the opportunity to provide his report.

Dr. Ford thanked Row for his briefing and turned the discussion to new research funding received since the last board meeting in June. He informed the Board that IHMC has received 21 new grant or contract awards totaling approximately \$8M in new research funding. Dr. Ford also added that he would briefly discuss several of the new projects and that among these new projects, Dr. James Allen will be partnering with SAIC and Carnegie Mellon University to pursue multi-lingual human language translation

technologies under the Defense Advanced Research Projects Agency's Broad Operational Language Translation program. He explained that in particular, James and his team will develop algorithms for human-machine communication in English and one Arab dialect to enable complex voice commands that will control diverse applications from computer programs to robots.

Dr. Ford then commented that Dr. David Atkinson, working in our Ocala facility, recently received two awards from the Air Force Research Laboratory related to trust in autonomy. In Dave's first new grant, he will provide advice and consultation to the Air Force's 711<sup>th</sup> Human Performance Wing, Human Effectiveness Directorate Trust Research Group, on how autonomous systems technology affects human-machine interaction with potentially important implications for trust. Dr. Ford explained that Dave has already conducted one tutorial at Wright-Patterson Air Force Base in Dayton, Ohio, with extremely positive feedback from a long list of military and civilian attendees. He mentioned that Dave's second new grant is for a workshop on human-machine trust for robust autonomous systems, which will be held in Ocala at the end of January. We are all very excited about this meeting, which will be kicked off with a keynote address by the Air Force Chief Scientist – Dr. Mark Maybury. Dr. Ford also mentioned that IHMC recently learned that AFOSR has decided to fund another of Dave's proposals, a substantial grant, that we will report at the next Board meeting as we are still in the contracting process but noting that Dave is off to a good start.

Dr. Ford then turned the discussion to a new grant for Dr. Robert Hoffman who will be teaming with Applied Research Associates, Inc., to be part of the Intelligence Advanced Research Projects Agency's Sirius program. He mentioned that the goal of this program is to create experimental Serious Games, games with a purpose other than pure entertainment, to train participants and measure their proficiency at recognizing and mitigating cognitive biases that commonly affect intelligence analysis. Robert's role will support cognitive data collection protocols, as well as analysis of the collected data and identifying associated measures of effectiveness.

Dr. Ford mentioned that Matt Johnson, one of IHMC's up-and-coming researchers, who is currently pursuing his Ph.D. remotely at one of the world's best technical universities, Delft University of Technology in the Netherlands, recently received two new awards. One from NASA to design rotorcraft approach trajectories that minimize the amount of ground noise produced, and one from the Air Force Research Laboratory to design autonomy algorithms that would enable micro-air vehicle operations in complex urban environments, both interior and exterior. He added that on a daily basis, Matt works across a number of our research groups, engaging in topics ranging from robotics to human-machine collaboration and coordination to human-centered visualization and that IHMC is very enthusiastic about his future.

Dr. Ford commented that an important aspect of IHMC's charter is to pursue technologies that enhance human performance, and Dr. Anil Raj will be doing that in a fairly exciting way through a new project to develop a novel motorsports information display that will augment driver performance during training and racing via a wearable

tactile interface. Dr. Ford explained that over the next 18 months, Anil will be working with the Australian firm Racing Incident to integrate sensory augmentation technologies into a cooling shirt worn under a driver's protective racing suit to encode cues for time gain or loss per lap, steering angle, shift points and traction. The outcomes of this effort will be applied to Carrera Cup, V8 Supercar, and other racing leagues, and there is currently a long line of people willing to serve as both professional and novice test drivers.

Dr. Ford concluded his discussion of some of the new awards mentioning that Dr. Niranjani Suri recently received a substantial grant from the Army Research Laboratory to continue his work in agile computing, where he is developing methods to opportunistically discover and exploit available computational and communications resources in order to improve capability, performance, efficiency, fault tolerance and survivability of networks. He explained that this new effort would extend the notion of agile computing to better support battlefield information management, command and control, data to decision and network science in general. Dr. Ford reiterated that in addition to these recent awards discussed, that IHMC has over \$7M in approved contracts and grants and contracts currently under negotiation.

Dr. Ford reminded the Board of the firsthand opportunity they had received in June, seeing Dr. Peter Neuhaus' work in powered exoskeletons, adding that he will be further continuing this work via a collaboration with NASA Johnson Space Center, where they will jointly develop lower limb robotic exoskeleton technology. He mentioned that these wearable exoskeleton technologies can be applied to a number of different areas, including exercise, microgravity countermeasures, mobility assistance, strength augmentation, and rehabilitation commenting that from NASA's perspective, the ability to exercise and mitigate bone loss in space is key.

Dr. Ford discussed another notable award to Dr. Yorick Wilks in partnership with Carnegie Mellon University and SAIC under the IARPA Metaphor program, which seeks to exploit the fact that metaphors are pervasive in everyday thought and speech and, from an intelligence perspective, can reveal the underlying beliefs and worldviews of members of a culture. He explained that Yorick's role, as co-PI with the CMU PI, is to use his expertise in natural language processing to develop methods for metaphor identification and interpretation. Dr. Ford mentioned that Dr. Robert Hoffman will also be involved to validate metaphors and their meaning using social science methods.

Concluding his research briefing, Dr. Ford noted that select IHMC researchers continue to support the federal government through IPA or temporary federal assignments and that during the past two quarters, Dr. David Maluf's assignment with NASA Ames Research Center was renewed for a two year period, and that IHMC is currently in the process of renewing Bill Clancey's IPA, also with NASA Ames. He added that during his new assignment term, David will be acting technical lead in the area of collaborative and assistant systems, as well as a PI on numerous projects in data and information management and that Bill, in turn, will continue leading the area of human-centered computing at Ames.



Dr. Ford then turned the discussion to community outreach informing the Board that he was pleased to have a terrific line-up of speakers for the Evening Lecture Series this Spring in both Pensacola and Ocala. He suggested that if any Board members have any interest in attending dinner, meeting the speaker or sponsoring any of these lectures, that he would be happy to make that happen. He mentioned that Science Saturdays is going strong in both Ocala and Pensacola and the number of students registering continues to climb and that IHMC is doing everything possible to meet the growing demand.

Dr. Ford concluded his report mentioning that as everyone may know, the Ocala Holiday party was last week, the evening following Jon Mills lecture, on privacy, and was a great event and turnout. He reminded the Board that the Pensacola party was this Friday night, the evening following the Wes Huntress lecture, on Space Exploration, adding that it has been a busy two weeks. He mentioned that he was leaving immediately following this meeting for a quick DC trip to host a NASA Blue Sky meeting in Washington.

Dr. Ford then thanked all of the Board for their faithful and tireless service on the IHMC Board of Directors stating that he truly appreciated both their time and commitment and wished all a wonderful holiday season.

With these remarks, Dr. Ford informed Acting Chair Baker that this would conclude his report and that he appreciated the opportunity to update the Board.

Acting Chair Baker thanked Dr. Ford for his report and then asked the Board if there were additional items to come before the Board. With no additional comments, Acting Chair Baker adjourned the meeting at 9:25 a.m.

Respectfully submitted,  
Julie Sheppard, Corporate Secretary