



**Crispi, Angela**

**From:** Gallagher, Stephen  
**Sent:** Tuesday, December 20, 2016 12:21 PM  
**To:** Crispi, Angela  
**Subject:** FW: Polling tool

Just an FYI...

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**From:** "Edelman, Benjamin" <bedelman@hbs.edu>  
**Date:** Monday, December 19, 2016 at 6:31 PM  
**To:** Stephen Gallagher <sgallagher@hbs.edu>  
**Subject:** RE: Polling tool

Steve,

Thanks for thinking about this.

I see some of these questions a bit differently. I was thinking of my new tool as a prototype for experimentation, in part to help us hone a feature set and UI for the official polling tool improvements that I gather are still under discussion. (In that regard, my old Participation Tracker offers a handy model: Let me prototype the features, iterating quickly and at low cost. Then when IT builds in its preferred architecture, it's much easier to provide the desired functionality the first time.) I certainly did not intend to position my tool as production/enterprise software, and while I tested it in the ways that seemed prudent, ultimately instructors choose this tool with a fair recognition of possible first-time-around glitches. I think my users will understand that, seeing my tool more like any other app they bring to the classroom for a specific teaching need, and understanding that it's not a built-in part of the classroom that they can count on with the level of reliability that IT provides. But given the integration with built-in room fixtures, I know some people could be confused about who's responsible and how good it is. I discussed with Kate the level of support I thought Media Services should provide – none! – but I realize that's easier said than done. I credit your concern.

I take your "mission critical" reference to ask whether the proposed interface, and my tool connecting to it, could harm classrooms or reduce reliability or functionality of classroom systems. I hope and intend not. Rather, I have always thought that any failures would be limited to my tool itself. For example, if my tool can't process the data the Crestron sends, then my tool could crash or show invalid tabulations. If my tool sends commands to the Crestron in an invalid format, the erroneous commands will be rejected. (That much I have tested vigorously, with reliable results.) To me these seem like risks we can live with, and to me these don't seem like grounds to withhold features that are ready and that instructors want. If your review or your teams' review have flagged any specific concerns here, I definitely want to understand. Otherwise, I think this should be viewed as pretty low-risk – a small EXE of trusted code (not third-party code) that doesn't even need admin privileges on the local machine; connecting to a new purpose-built limited-functionality interface; accessing only transient data of low importance; with backup systems (other teaching plans) available and instructors on affirmative notice that they're trying something new.

Separately, I'm trying to reconcile your message with my past year of discussions with Ben Frey and later Kate Targett, designing the Crestron-side interface to which I am connecting. I thought the agreed plan was to deploy the programmatic polling interface to all the rooms with polling buttons, and there was email discussion about this along the way. I would have found it hard to justify writing the tool, or asking Media Service to contract the external developer, if this was to be limited to just the three rooms where the code has been deployed so far. When I met with Kate last month, she mentioned ongoing review of the new interface by the security team. That much, at least, seems straightforward, and I think it will turn out well for reasons much like those in the prior paragraph. But your message raises more fundamental concerns that probably cannot be addressed through technical review. If I had known about

such concerns from the outset – for example, that any software I write to use the polling interface would need to be approved by ATSC or IT or others – I think I would have been much more hesitant to jump in.

I'd be happy to discuss this with ATSC. I know Willis is excited about it. Indeed, my discussions with him solidified my interest in the multi-round polling functions, which he predicted will be useful in quite a few teaching plans in a variety of courses. I have also discussed various of these features with other senior colleagues (not ATSC members), and I've been pleased and frankly surprised by the favorable response – even from those who, like me, previously rarely to never used the polling buttons. How would we get ATSC feedback in light of the timing? I think our next ATSC meeting is in April, by which point we've missed the whole semester. Given the impossibly busy schedules, I would not want to attempt to convene an ATSC meeting just for this. Email discussion might be possible depending on the issues at hand. I've felt ATSC is best positioned to assist on questions where there's a fundamental and unavoidable tradeoff. At least as I had thought about this interface and my software, there's not supposed to be a tradeoff – just some new options for the faculty who want them, but no downside to anyone else.

I too looked into commercial tools. I found nothing that could connect to our built-in room buttons – not surprising given the homegrown hardware and software there. I know I'd be much less excited about a solution that requires passing out devices each day or taping down unsightly cables to every seat – too much trouble, sending the wrong signal about how polling fits with other aspects of class. So I had thought we were going to be stuck with custom code – mine, or in Crestron, or something else – to use the hardware we have. If that's not correct, I'd particularly like to be set right.

I wonder if it might be useful for us to talk by phone. Your multi-faceted concerns may be easier for me to understand, and try to engage with, synchronously. And I can tell you more about the vision of how this tool is supposed to be all pros with no substantial cons, and my vision of how I'd make it so. I'm in Asia through the new year, but the time difference actually makes things easy in some respects. 9am in Boston is 10pm for me which is always fine. But I have calls at all hours so can accommodate whatever time works best for you. My outgoing calling is easier than incoming, so I propose that I call you at the time and number you prefer.

Ben

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**From:** Gallagher, Stephen  
**Sent:** Monday, December 19, 2016 1:49 PM  
**To:** Edelman, Benjamin <bedelman@hbs.edu>  
**Subject:** Polling tool

Ben,  
Kate Targett shared your message regarding the polling tool you've been developing. I appreciate your active interest in technologies aimed at improving the teaching/learning experience in the classroom. That said, we cannot roll out non-enterprise software into the classrooms in a non-standard way, as they are mission critical environments that must be handled in a careful and controlled manner.

If we are to proceed with this, we need to use established processes to help guide our decision making. Thus, let's bring this to the ATSC before proceeding. That committee was formed specifically to oversee academic technology decisions, which include new technologies in and for the classroom. Given your membership on the committee, you are especially well-positioned to bring this forward.

It is worth noting that commercial solutions exist that can enhance our current polling solution, and if there is expressed faculty demand for that, we certainly want to comprehensively understand the need so that we may best meet it. Again, the ATSC is a good place for exploring future IT services related to teaching and learning, including expanding service offerings related to student polling.

Thank you again for your interest in this topic. I hope that you and yours have an enjoyable holiday break.

All the best,  
Steve

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