This is a pre-print version of the Ron Balthazor and Elizabeth Davis' webtext "Infrastructure and Pedagogy: An Ecological Portfolio" published in *Kairos: Rhetoric, Technology, Pedagogy*, 20(1), available at http://kairos.technorhetoric.net/20.1/coverweb/balthazor-davis.

Building the Ecosystem: Text of the Forum Discussion

ED: Does the CMS's own underlying architecture – its internal infrastructure, if you will – limit the CMS's ability to provide an infrastructural support for a larger, university-wide effort such as a coherent writing initiative?

RB: It's not the bowling ball, it's the bowler. The CMS is an essential part (like the ball), but the benefits and liabilities lie more with the instructional infrastructure. If anything, though, a thoughtful, pedagogically based CMS enables both individuals and programs to achieve larger goals. Particularly, the CMS can create the shared space for pedagogy that uses a shared vocabulary and shared tools for research, revision, peer review, and assessment. Thus, the CMS really serves the larger program well.

ED: And, if so, what can be done to minimize those limitations and allow its innate strengths to better play a role in the emergent discourse surrounding writing on campus?

RB: Minimizing the limitations really means creating the larger investment in writing instruction in any way possible. If the CMS allows for more writing and revision, even a modest increase across the disciplines, it is helping. Perhaps we should be asking what are the impediments to the expansion of the CMS across the curriculum? What new support can we bring to bear for expanding process and peer review to the broader audience?

ED: Can the processual and recursive approach to writing embedded in <emma>'s structure help make visible the emergence of knowledge about writing across campus and the curriculum in the way a writing portfolio can make visible the way a student comes to a knowledge about writing in a discipline for a particular course or certificate program?

RB: Yes, but again, it's not the bowling ball. <emma> can facilitate the discovery of emerging knowledge in part by creating a constant record of the process, but also by encouraging the reflection on learning through the process. The reflection indeed is the glue that holds the parts of the portfolio (to offer one particular example) together. One of the core principles in <emma> development is to remain nimble as we look forward. The technologies we use continue to evolve, so we hope in the next version of <emma> to facilitate insight through new uses of tagging, indexing, and searching, i.e., allowing the technology to show us our writing in a new way.

ED: Can we better foster an approach to assessment based on understanding process that might be adoptable and adaptable across the diverse disciplines and fields in a large, comprehensive research university such as ours?

RB: Assessment is vital and hard. Local, programmatic, and institutional assessment needs often vary. Nonetheless, finding smart ways to let the technological infrastructure collect data that can

be aggregated for institutional insight and sliced for local feedback loops is idea. The best assessment shows more than what we expected to see. Technology can constantly collect and aggregate lots of data; it is what the machine is good at, and it offers us new insight without requiring significantly more of instructors' time.

ED: As we think about the growth of the WCP and the possibility that more students may want to come to portfolio-keeping in order to have samples of work ready and available for assessment not just within the university, but without as students increasingly want – and need – stable digital portfolios capable of handling increasingly complex multimedia artifacts, how can those eportfolios be set up so that students can review, receive feedback on, and revise their work at many different stages in their academic and post-academic careers?

RB: A real key to moving forward is the expansion of possibilities in the <emma> portfolio. Currently, the portfolio uses a course-based metaphor that limits the scope of collection and reflection. We need to expand the portfolio's core metaphor to encourage long term collection of work and richer reflection on the collection of documents.

Also, though <emma> is fundamentally focused on writing in the most traditional sense, we also see it as a hub for the increasingly diverse forms of multimedia composition that are emerging. Since offering the possibility of browser-based editing, we can incorporate images and video more readily in the documents. <emma> has always allowed the inclusion of links to external sources as well. In the last year, we have improved the ability in <emma> to comment on internal documents and external links. Any listing in <emma>, whether pdf, blog, or wiki, can function as a hub for review in that for any listing that is available to the class, there is a community comment space. This space is meant to be for quick responses and for collaborative feedback for any type of work the student is doing. It extends the possibility for peer review beyond the document and beyond the application.