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## Competing Against Historical LINKS Teams

Randall G. Chapman, PhD

Chapman@LINKS-simulations.com

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*"Those who cannot remember the past are condemned to repeat it." - George Santayana*

In standard LINKS usage, an instructor's class is divided into teams ("firms" in LINKS) that compete against one another within a LINKS industry. This is traditional direct competition among current-student teams in an instructor's current course. There are no computer controlled firms in LINKS.

### LINKS Architecture

Instructors can include historical LINKS firms as competitors in a current LINKS event.

Competing against historical firms involves a re-play of a pre-existing (historical) LINKS industry with the same setup, market conditions, and sequencing of within-event instructor-optional switches. In a LINKS re-play, some firms are managed by current-student teams who compete against the historical decisions of other firms within the re-played LINKS industry.

This LINKS innovation will be especially interesting to instructors with smaller classes whose only other viable alternatives would seem to be:

- **Use an inert firm.** An inert benchmark competitor firm never changes any decisions from the initial ones set by the LINKS software at industry initialization. An inert firm is not computer controlled because no pre-programmed decision logic and "what-if" decision rules exist within LINKS to change decisions in a purposeful, competitively context-sensitive, goal-seeking fashion. However, an inert firm still has relevance and potential merit as a benchmark competitor in a LINKS industry:

what happens to a firm that never changes any decisions throughout a LINKS event? And, in particular, what conclusions can be drawn about a current-student firm that underperforms an inert benchmark competitor firm? Unflattering conclusions, to be sure!

- **Use more smaller-sized teams to provide meaningful competition in a LINKS industry.** However, teams consisting of "about" four students are generally recommended for the LINKS simulations. Smaller-sized teams may miss the richness and associated inherent learning opportunities of within-team discussions in larger-sized teams.
- **Join forces with another instructor using the same LINKS simulation variant with a similar event schedule in a cross-institution LINKS industry.**

In a re-play of a pre-existing (historical) LINKS industry, some firms are composed of current students in an instructor's course while other firms (and their decision inputs) are drawn from the historical LINKS archives. Instructors can freely mix-and-match current-student teams and historical competitors within a re-play of a pre-existing (historical) LINKS industry. By assigning current-student teams to manage lower-performing historical firms in a re-play, better-performing historical teams provide meaningful competition for current-student teams.

Since the current and historical firms are competing in the same LINKS marketplace, they both have to (for current firms) or had to (for historical firms) respond to common underlying market forces such as cost

structure, market drivers, and market growth patterns. Thus, such historical firms provide meaningful competition for current-student teams.

### **Game Run Logistics**

Logistically, LINKS game runs with historical competitors use the decision inputs of the current-student teams (as submitted in the usual fashion via the LINKS Simulations website) along with the decision inputs of the historical firms drawn from the industry's historical archives. This is all managed within the LINKS software once appropriate "pointers" are activated to identify the historical firms whose decision inputs are drawn from the historical industry's archives.

For such a re-play to be viable, the complete history of the industry must be accessible so that historical competitors' decisions may be used throughout the current LINKS event. Since we archive all LINKS industries to backup storage at the conclusion of each LINKS event, historical LINKS industries are accessible for re-plays.

### **Practical Considerations**

In selecting a LINKS industry to re-play, there are some relevant considerations to note.

- A relatively "recent" historical industry is required so that the underlying data file structure is consistent with the current LINKS software. With 300+ new LINKS industries annually across the LINKS Simulations variants, this is normally not a major issue.
- A re-play requires that the instructor's current LINKS event follows the same event structure (parameter file, market conditions, and sequencing of instructor-optional switch settings) as in the re-played historical industry. For long-time LINKS instructors, this is normally not a problem since instructors tend to follow similar LINKS industry event designs through time.

Instructors should presumably be "truthful" with their current students when describing the

nature of the competitors in a LINKS event based on the re-play of a historical LINKS industry. Current students can obviously observe the number of students in their class and discrepancies between visual counts of current class size and the number of LINKS firms in their industry will be obvious to all involved.

### **For Further Conversation**

Instructors interested in exploring the option of a LINKS event with their current-student teams competing against historical LINKS teams are invited to contact Randy Chapman, the LINKS author (Chapman@LINKS-simulations.com) for conversation.