EXECUTIVE SUMMARY
PEER INSTITUTION ANALYSIS
February 27, 2004

In November, 2003 the Commissioner of Higher Education requested that the University, College and Community College each select 10 peer institutions. The Commissioner further stipulated that seven of the institutions must be similar to URI and three institutions be ones that we aspire to be like.

A large data set was assembled with several key variables and a series of formal statistical analyses were done to determine which institutions were similar to the University. The details of that process and statistical analyses are listed on the following pages of this document. The approach resulted in the selection of the following institutions that will be used to make future comparisons to URI.

Peers - Similar to URI:

1. JAMES MADISON UNIVERSITY
2. UNIVERSITY OF NEW HAMPSHIRE
3. UNIVERSITY OF VERMONT
4. UNIVERSITY OF WYOMING
5. NORTH DAKOTA STATE UNIVERSITY
6. MONTANA STATE UNIVERSITY-BOZEMAN
7. UNIVERSITY OF MAINE

Peers - Aspire to be like:

8. UNIVERSITY OF CONNECTICUT
9. UNIVERSITY OF DELAWARE
10. UNIVERSITY OF VIRGINIA

Details regarding the selection process, statistics and conclusions are provided in the following material.
SPECIFICATIONS PER COMMISSIONER WARNER:

1. Select 10 peers that will be used to make comparisons. The type of questions or comparisons will be based on the Board of Governors/OHE Goals and Objectives listed in the RI Higher Education strategic plan.

2. Seven of the institutions must be similar to URI and we have been instructed to select three institutions that we aspire to be like.

THE PROCESS:

We started with 600 institutions with at least Carnegie Classifications of Doctoral Intensive, Doctoral Extensive and a small set of institutions that are classified as Masters Degree granting 1 and 2.

Next we ensured that the list included all the institutions that URI, OHE, NCES, NCHEMS had listed as peers for the University of Rhode Island.

We narrowed the list of institutions further by identifying institutions that had listings of online data in the “Common Dataset Exchange” and with IPEDS. This helped to secure a significant amount of academic and financial data for each institution.

We focused on approximately 25 key variables that are included in the data set. These included things such as total enrollment, percent of out-of-state freshman, percent of out-of-state undergraduates, academic performance variables (SAT and high school rank), institution budget, State allocation, tuition, fees, etc.

The list was narrowed to 39 institutions, based on consideration of data and proximity of the institutions. We made an effort to retain private institutions that had somewhat similar academic data to URI. Recently we removed Northeastern and SUNY-Stoneybrook from the data set because there were some critical variables with missing data for those two institutions. It required approximately one month to locate missing data values that were needed to run the cluster analysis.

The following 37 institutions are currently in the listing of peers and these are the institutions that were put through a series of Cluster Analyses (using 4 different cluster analysis techniques) in SAS.
INSTITUTIONS IN DATA SET (37):

AUBURN UNIVERSITY MAIN CAMPUSS BOSTON UNIVERSITY
CLARK UNIVERSITY CLEMSON UNIVERSITY
COLORADO STATE UNIVERSITY FLORIDA STATE UNIVERSITY
IDAHO STATE UNIVERSITY JAMES MADISON UNIVERSITY
KEENE STATE COLLEGE MONTANA STATE UNIVERSITY-BOZEMAN
NEW YORK UNIVERSITY NORTH DAKOTA STATE UNIVERSITY
OKLAHOMA STATE UNIVERSITY-MAIN CAMPUS OREGON STATE UNIVERSITY
PURDUE UNIVERSITY-MAIN CAMPUS RUTGERS UNIVERSITY-NEW BRUNSWICK
UNIVERSITY OF ALABAMA UNIVERSITY OF COLORADO AT BOULDER
UNIVERSITY OF CONNECTICUT UNIVERSITY OF DAYTON
UNIVERSITY OF DELAWARE UNIVERSITY OF HARTFORD
UNIVERSITY OF MAINE UNIVERSITY OF MASSACHUSETTS-AMHERST
UNIVERSITY OF NEVADA-RENO UNIVERSITY OF NEW HAMPSHIRE-MAIN CAMPUS
UNIVERSITY OF PORTLAND UNIVERSITY OF RHODE ISLAND
UNIVERSITY OF VERMONT UNIVERSITY OF VIRGINIA-MAIN CAMPUS
UNIVERSITY OF WYOMING WASHINGTON STATE UNIVERSITY
UNIVERSITY OF MARYLAND-BALTIMORE COUNTY NORTH CAROLINA STATE UNIVERSITY-RALEIGH
SUNY AT ALBANY UNIVERSITY OF SOUTH CAROLINA AT COLUMBIA
NEW MEXICO STATE UNIVERSITY-MAIN CAMPUS OLD DOMINION UNIVERSITY

TOTAL VARIABLES COLLECTED FOR EACH INSTITUTION:

CARNEGIE CLASSIFICATION IPEDS UNIT ID
INSTITUTION NAME PUBLIC / PRIVATE
ENDOWMENT STATE BUDGET APPROPRIATION
TOTAL OPERATING BUDGET FY 2002 COST OF INSTRUCTION
ANNUAL RESEARCH FUNDING CPI BY GEOG AREA
CITY STATE
URI OHE OR NCHEMS - PAST PEERS OUT-OF-STATE FRESHMAN
OUT-OF-STATE UNDERGRAD TOTAL UNDERGRAD ENROLLMENT
TOTAL GRADUATE ENROLLMENT TOTAL ENROLLMENT
BACHELOR'S DEGREE MASTERS DEGREE
DOCTORAL DEGREE FIRST PROFESSIONAL DEGREES/CERT.
GRADUATION RATE SAT VERBAL 25%
SAT VERBAL 75% SAT MATH 25%
SAT MATH 75% TOP 10% HS
TOP 25% HS TOP 50% HS
UNDERGRAD IN STATE TUITION UNDERGRAD OUT OF STATE TUITION
MANDATORY FEES ROOM AND BOARD FEES
FULL TIME INSTRUCTIONAL FACULTY PART TIME INSTRUCTIONAL FACULTY
TOTAL INSTRUCTIONAL FACULTY (NCHEMS) STUDENT FACULTY RATIO
RESULTS OF CLUSTER ANALYSIS:

Due to a limitation on the number of variables that could be included in the cluster analysis, we chose 4 key variables that were run through a “first stage” cluster analysis. All variables were normalized and SAS (Statistical Analysis System) software was used to run the cluster analysis:

CLUSTER ANALYSIS FIRST STAGE VARIABLES:
STATE BUDGET APPROPRIATION
TOTAL UNDERGRAD ENROLLMENT
TOTAL OPERATING BUDGET FY 2002
TOTAL GRADUATE ENROLLMENT

This resulted in a set of 5 broad clusters (or 7 more narrowly clusters, depending on how one views the tree diagram) of institutions with similar characteristics (based on the 4 variables analyzed).
CLUSTER ANALYSIS SECOND STAGE VARIABLES:

COMBINED MATH & VERBAL SAT AT 75 PERCENTILE
ANNUAL RESEARCH FUNDING (NORMALIZED BY NCHEMS FULL-TIME FACULTY HEADCOUNT)
OUT-OF-STATE UNDERGRADUATES (ARCH TRANSFORMATION APPLIED TO PERCENTAGE)

It was determined that the introduction of the second stage variables to the cluster analysis did not change the overall groupings and the cluster of institutions around URI was stable.

DISCRIMINATE ANALYSIS

In order to check the cluster analysis results, we completed a discriminate analysis on the 7 narrow clusters using the 4 variables (State Budget Appropriation, Total Operating Budget, Undergraduate Enrollment and Graduate Enrollment). When the University of Rhode Island was included in the discriminate analysis along with the 36 other institutions that were in 7 groups/clusters, the probability that URI fell into any one of the 7 groups is as follows:

**Group 0:** 0.00% Probability URI is in Group 0
BOSTON UNIVERSITY       PURDUE UNIVERSITY-MAIN CAMPUS
UNIVERSITY OF ALABAMA    RUTGERS UNIVERSITY-NEW BRUNSWICK
UNIVERSITY OF VIRGINIA-MAIN CAMPUS   NEW YORK UNIVERSITY
FLORIDA STATE UNIVERSITY

**Group 1:** 63.21% Probability URI is in Group 1
JAMES MADISON UNIVERSITY       UNIVERSITY OF NEW HAMPSHIRE-MAIN CAMPUS
UNIVERSITY OF VERMONT         UNIVERSITY OF WYOMING
NORTH DAKOTA STATE UNIVERSITY   MONTANA STATE UNIVERSITY-BOZEMAN
UNIVERSITY OF MARYLAND-BALTIMORE COUNTY   UNIVERSITY OF MAINE
IDAHO STATE UNIVERSITY

**Group 2:** 1.38% Probability URI is in Group 2
UNIVERSITY OF DAYTON         UNIVERSITY OF HARTFORD
KEENE STATE COLLEGE         UNIVERSITY OF PORTLAND
CLARK UNIVERSITY

**Group 3:** 0.02% Probability URI is in Group 3
UNIVERSITY OF SOUTH CAROLINA AT COLUMBIA       UNIVERSITY OF CONNECTICUT
NORTH CAROLINA STATE UNIVERSITY-RALEIGH       COLORADO STATE UNIVERSITY
UNIVERSITY OF COLORADO AT BOULDER
**Group 4: 7.95% Probability URI is in Group 4**
OLD DOMINION UNIVERSITY

**Group 5: 27.1% Probability URI is in Group 5**
SUNY AT ALBANY
NEW MEXICO STATE UNIVERSITY-MAIN CAMPUS
CLEMSON UNIVERSITY
UNIVERSITY OF NEVADA-RENO
UNIVERSITY OF DELAWARE
OREGON STATE UNIVERSITY

**Group 6: 0.35% Probability URI is in Group 6**
OKLAHOMA STATE UNIVERSITY-MAIN CAMPUS
WASHINGTON STATE UNIVERSITY
AUBURN UNIVERSITY MAIN CAMPUS
UNIVERSITY OF MASSACHUSETTS-AMHERST

The discriminate analysis confirms that URI is most similar to the institutions listed above in Group 1. That is, there is a 63.21 percent chance that URI falls into Group 1, which is vastly greater than the probabilities that URI falls into any of the other groups or clusters.

**CONCLUSIONS**

The cluster analysis and discriminate analysis indicate that URI is consistently similar to a group of institutions. The institutions that most closely resemble URI are as follows:

JAMES MADISON UNIVERSITY
UNIVERSITY OF NEW HAMPSHIRE-MAIN CAMPUS
UNIVERSITY OF VERMONT
UNIVERSITY OF WYOMING
NORTH DAKOTA STATE UNIVERSITY
MONTANA STATE UNIVERSITY-BOZEMAN
UNIVERSITY OF MAINE

Consequently, we are recommending that these seven universities be selected as our new peer institutions. The following three Universities are selected as institutions that we aspire to be like:

UNIVERSITY OF CONNECTICUT
UNIVERSITY OF DELAWARE
UNIVERSITY OF VIRGINIA

The University of Connecticut is selected based on geographic considerations, relatively higher salary structure, and generally higher ranking in national polls. The University of Delaware is selected due to their endowment funds, capital infrastructure and relatively high numbers of out-of-state students enrolled. The University of Virginia is selected for the research funding, endowment funds, and top level rankings in all national polls.