### MTS SYSTEMS CORP

## Form SC 13G/A

### February 14, 2017

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, DC 20549
Schedule 13G
Under the Securities Exchange Act of 1934
(Amendment No.4)\*
MTS Systems Corp.
(Name of Issuer)
Common Stock
(Title of Class of Securities)
553777103
(CUSIP Number)
12/31/2016
(Date of Event Which Requires Filing of this Statement)
Check the appropriate box to designate the rule pursuan

(Date of Event Which Requires Filing of this Statement)
Check the appropriate box to designate the rule pursuant to which this
Schedule is filed:

[X] Rule 13d-1(b) [\_] Rule 13d-1(c) [\_] Rule 13d-1(d)

The remainder of this cover page shall be filled out for a reporting person's initial filing on this form with respect to the subject class of securities, and for any subsequent amendment containing information which would alter the disclosures provided in a prior cover page.

The information required in the remainder of this cover page shall not be deemed to be "filed" for the purpose of Section 18 of the Securities Exchange Act of 1934 ("Act") or otherwise subject to the liabilities of that Section of the Act but shall be subject to all other provisions of the Act (however, see the Notes).

### CUSIP No. 553777103

1. Names of Reporting Persons

I.R.S. Identification Nos. of above persons (entities only).

Ariel Investments, LLC

# 02-0712418.

2. Check the Appropriate Box if a Member of a Group (See

Instructions) (a)[\_]

(b) [\_]

Not Applicable

- 3. SEC Use Only
- 4. Citizenship or Place of Organization

Delaware Limited Liability Company

Number of

Shares Beneficially Owned By Each Reporting Person With

5. Sole Voting Power

Ariel: 1,624,231

6. Shared Voting Power

Ariel: 0

7. Sole Dispositive Power

Ariel: 1,791,564

8. Shared Dispositive Power

Ariel: 0 Aggregate Amount Beneficially Owned by Each Reporting Person 9. Ariel: 1,791,564 10. Check if the Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions) [ ] Not Applicable 11. Percent of Class Represented by Amount in Row (9) Ariel: 1,791,564/16,674,992=10.7% Type of Reporting Person (See 12. Instructions) Ariel - IA Item 1. Name of Issuer (a) Address of Issuer's Principal Executive Offices (b) Item 2. Name of Person Filing (a) Ariel Investments, LLC Address of Principal Business Office, or if none, Residence (b) 200 E. Randolph Street, Suite 2900, Chicago, IL 60601 (C) Citizenship a Delaware Limited Liability Company Title of Class of Securities (d) Common Stock CUSTP Number (e) 553777103 Item 3. If this statement is filed pursuant to sections 240.13d-1(b) or 240.13d-2(b) or (c), check whether the person filing is a: [-1]Broker or dealer registered under section 15 of the Act (15 (a) U.S.C. 780). Bank as defined in section 3(a)(6) of the Act (15 U.S.C. 78c). (b) [\_] Insurance company as defined in section 3(a)(19) of the [\_] (C) Act(15 U.S.C. 78c). [\_] Investment company registered under section 8 of the (d) Investment Company Act of 1940 (15 U.S.C. 80a-8). An investment adviser in accordance with section (e) [X] 240.13d-1(b)(1)(ii)(E); An employee benefit plan or endowment fund in accordance with (f) [\_] section240.13d-1(b)(1)(ii)(F); A parent holding company or control person in accordance with (g) [\_] section240.13d-1(b)(1)(ii)(G); (h) [\_] A savings associations as defined in Section 3(b) of the Federal Deposit Insurance Act (12 U.S.C. 1813); (i) [\_] A church plan that is excluded from the definition of an investment company under section 3(c)(14) of the Investment Company Act of 1940 (15 U.S.C. 80a-3); Group, in accordance with section 240.13d-1(b)(1)(ii)(J). (j) [\_] Item 4. Ownership. Provide the following information regarding the aggregate number and percentage of the class of securities of the issuer identified in Item 1.

Amount beneficially owned:

(See Page 1, No. 9)

- (b) Percent of class:
  - (See Page 2, No. 11)
- (c) Number of shares as to which such person has:
- (i) Sole power to vote or to direct the vote (See Page 1, No. 5)
- (ii) Shared power to vote or to direct the vote
   (See Page 1, No. 6)
- (iii) Sole power to dispose or to direct the disposition of (See Page 1, No. 7)
- (iv) Shared power to dispose or to direct the disposition of (See Page 1, No. 8)

Item 5. Ownership of Five Percent or Less of a Class.

If this statement is being filed to report the fact that as of the date hereof the reporting person has ceased to be the beneficial owner of more than five percent of the class of securities check the following [\_].

Item 6. Ownership of More than Five Percent on Behalf of Another Person.

Ariel Investments, LLC's adviser clients have the right to receive or the power to direct the receipt of dividends from, or the proceeds from the sale of, all securities reported upon this Schedule. Ariel Fund, a series of Ariel Investment Trust, an open-end management investment company, has an economic interest in more than 5% of the subject securities reported upon this Schedule.

Item 7. Identification and Classification of the Subsidiary Which Acquired the Security Being Reported on by the Parent Holding Company.

Not Applicable

Item 8. Identification and Classification of Members of the Group.

Not Applicable

Item 9. Notice of Dissolution of Group.

Not Applicable

Item 10. Certifications.

By signing below I certify that, to the best of my knowledge and belief, the securities referred to above were acquired and are held in the ordinary course of business and were not acquired and are not held for the purpose of or with the effect of changing or influencing the control of the issuer of the securities and were not acquired and are not held in connection with or as a participant in any transaction having that purpose or effect.

#### SIGNATURE

After reasonable inquiry and to the best of my knowledge and belief, I certify that the information set forth in this statement is true, complete and correct.

Ariel Investments, LLC

By: /s/ Wendy D. Fox

Wendy D. Fox

Vice President/Chief Compliance Officer

The original statement shall be signed by each person on whose behalf the statement is filed or his authorized representative. If the statement is signed on behalf of a person by his authorized representative other than an executive officer or general partner of the filing person, evidence of the representative's authority to sign on behalf of such person shall be filed with the statement, provided, however, that a power of attorney for this purpose which is already on file with the Commission may be incorporated by reference. The name and any title of each person who signs the statement shall be typed or printed beneath his signature.

NOTE: Schedules filed in paper format shall include a signed original and five copies of the schedule, including all exhibits. See section 240.13d-7 for other parties for whom copies are to be sent.

Attention: Intentional misstatements or omissions of fact constitute Federal criminal violations (See 18 U.S.C. 1001)